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A CONTRIBUTION TO THE STUDY OF A GROUP OF
CASES OF CHRONIC RECURRENT DIARRHŒA IN
CHILDHOOD.*

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(Continued from p. 155.)

IN the first part of this paper published in the preceding number of this JOURNAL we have already given some clinical examples, which we continue here, and conclude with some general observations upon the condition, dealing chiefly upon the practical side of the subject.

CASE 6.—Male, aged 4 years 10 months. He was admitted to hospital in February, 1913, with the history that he had suffered frequently from attacks of severe diarrhœa ever since birth, his stools containing sometimes mucus and undigested food.

He had been subject to attacks of abdominal pain, which were associated with marked swelling of the abdomen and vomiting, and was described as always thirsty. He had never attempted to walk. He had pertussis when aged $3\frac{1}{2}$, and, as an infant,

* A paper read before the Medical Section of the Royal Society of Medicine on October the 28th, 1913.

was bottle-fed. He was described as a remarkably undersized boy with marked signs of rickets.

The skin of his face and head was rough and dry, his teeth extremely defective and carious. His abdomen was prominent but not tender on palpation; the liver extended $1\frac{1}{2}$ in. below the costal margin. The stools were dark in colour, slimy, with mucus and semi-formed. He was given a diet of milk and cereals and the carious teeth removed. He left the hospital after a month's treatment somewhat improved, having gained in weight from 1 st. 6 lb. to 1 st. $6\frac{1}{2}$ lb.

CASE 7.—Female, aged 4 years. This patient was under treatment, with characteristic coeliac symptoms, from April the 6th until July the 5th, 1913.

She was brought to hospital for backwardness. Her mother, who was unusually intelligent, had studied the child's case carefully, and was able to describe the illness with some accuracy. She stated that since the hot summer of 1911, when the child had suffered from a severe attack of acute summer diarrhœa, her digestion had been impaired and her bowels had never acted properly. During the three days prior to admission to hospital the child's motions had been white and solid, but before this she had frequent diarrhœa, the dejecta resembling weak tea. With reference to her previous history, it was stated that the child was a healthy baby, breast-fed for fourteen months, and afterwards progressing normally up to the age of two years. Since the age of two, however, from the attack of acute diarrhœa mentioned above, she had made no progress and had scarcely grown at all. As regards diet, it had been noted that eggs were always liable to cause immediate diarrhœa, meat foods invariably were better borne than milk or milk puddings, while the child herself preferred water rather than milk or tea to drink. She was the second child of a family of three, and both her brothers had been born with jaundice which had lasted during ten days. They are now healthy; when admitted to the ward there was nothing characteristic in the patient's appearance. Her intelligence was approximately that of her age. Her teeth were good. She was not rachitic. The abdomen was globular, full, but not greatly distended, no mass could be felt, or thickened gut, and there was no peristalsis, umbilical pouting or hernia. The stools were bulky, pultaceous, sour-smelling, offensive yellow or clay coloured. When on fat-free diet they became less offensive, less copious and much darker, but were never formed.

Gains weight.—April the 8th, 1913: Milk diet. Stools very fatty and offensive. April the 15th, 1913: Fat-free diet. Stools better, less bulky, still not formed, darker but not natural. April the 23rd, 1913: Ordinary diet. Stools again bulky, offensive, pale, butyric odour.

Loses weight.—May the 8th, 1913: Special diet for three days. Breakfast, 2 eggs and whey; dinner, broth and steak; tea, 2 eggs and whey; supper, 2 eggs and whey. Stools very numerous, darker and much more loose and offensive.

Gains weight.—May the 10th, 1913: Eggs, bacon, cream, full diet. Stools still bulky, putty-coloured, loose.

Stools on admission resembled an inferior grade of putty, but were rather granular than pasty; the odour was sharp and perhaps butyric; usually one *per diem*.

A bacteriological examination of a stool was made and the following organisms found: Many Gram-negative bacilli, many Gram-positive bacilli, a few Gram-positive streptococci; no dysentery bacilli could be isolated from the fæces.

Under hospital treatment the child's weight gradually rose from 25 lb. to 28½ lb. It was noteworthy that she was happier and more alert when on a fat-free diet, that her colour improved, and that the number of stools *per diem* was much less than on a full diet containing an average quantity of fats. The special diet containing eggs was very ill tolerated and gave rise to a rather offensive and frequent diarrhœa.

CASE 8.—Female. This case is of very great interest. She is now aged 9 years, and has been an inmate of the hospital from time to time since she was eighteen

months old. She was brought to hospital for an attack of diarrhoea and sickness with bronchitis of a week's duration. Although healthy at birth and making fair progress during the first year of life on a diet of cow's milk and barley-water, during the latter six months her mother had been dissatisfied with her progress, and had during two months prior to admission attended the out-patient department of the hospital.

An attempt to add bread and butter to the milk diet had been entirely unsuccessful. On admission she already presented the changes of rickets. The thorax was laterally compressed, with prominent sternum and marked beading of the ribs. Harrison's sulcus was well defined. The anterior fontanelle was unduly large for the age of the child, the epiphysis of the long bones everywhere enlarged. The abdomen was full, some tympanites present, and both liver and spleen enlarged. No teeth were present. The stools on admission were frequent, very offensive, green and slimy, but contained no blood. Although the symptoms speedily improved and with cessation of vomiting the stools began to assume a normal character, fourteen days after admission the child developed well-marked tetany. Facial irritability, carpopedal spasm and "obstetrician's hand" were all marked and Trousseau's sign was also present, and there was definite oedema of the dorsum of hands and feet. Laryngismus stridulus did not occur. The condition gradually passed off, and in the course of a fortnight had completely disappeared. Her weight was 13½ lb. Nothing was seen of the child until two years later, when at the age of 3½ she was again brought to hospital. Six months earlier she had had an attack of measles and with it diarrhoea. She improved for a time, but relapsed a month before coming to hospital, and during the last week was wasting and becoming rapidly worse. As many as twelve motions had been passed in the day, the stools being usually white, sometimes green. It was noted that the child appeared fairly well developed and moderately well nourished, that evidence of rickets were present, but there was no impairment of movement of limbs. Her teeth were good. She speedily improved, and on leaving hospital weighed 1 st. 6 lb. 8 oz.

Four years afterwards she was again brought to the hospital for swollen abdomen and looseness of the bowels. Her condition was at this time frankly diagnosed as "morbus coeliacus." The stools were pale, putty-like, soft and moulded and contained no visible bile, nor did the administration of ox-bile in capsules give rise to any change in their character. After ineffectual treatment during six weeks the patient was put on a fat-free diet on May the 8th, 1911. On May the 16th the motions, though still rather bulky and unformed, were of normal brown colour. On May the 23rd, the motions were formed, the child out of bed and doing well. She was now again put on an ordinary diet containing fats on June the 1st, and the stools reverted to their former type, and on June the 6th she was losing weight and was forced to return to bed. On June the 13th, though well enough to get up, she was still losing weight and was taking her food badly. On leaving hospital her weight was 2 st. 10 lb., whilst in hospital she had no diarrhoea, the number of stools averaging one *per diem*. A year later, the patient was again admitted for an attack of pain in the knees. Seven weeks before admission the knees became swollen and painful and the patient went off her legs. External splints were applied for the treatment of the genu valgum which was present, but the pain was aggravated by these and unrelieved by massage, and they were accordingly removed and the child put to bed. She was found to be bright and intelligent. The knees were bent and could not be extended, although easily and fully flexed; there was some peri-articular thickening both of knees and ankles, with limitation of movement at the ankle also. A skiagram of the knees showed increased translucency of the epiphyses and some irregularity of structure, a condition that is occasionally associated in adults with alimentary toxæmia or infection. Her stools showed the same characteristics as formerly. Several carious teeth

belonging to the milk dentition were removed and the pain in the knees and swelling gradually subsided, but the patient could not be induced to walk. Six months later she developed, without obvious cause, an attack of tetany with facial irritability and carpopedal contraction.

She was last seen in July, 1913, and could then walk with difficulty.

CASE 9.—Male, aged 11 years 5 months. He first came under observation when aged 5 years 8 months, in April, 1907. He was quite healthy until 1905, when he began to have diarrhœa. The motions were pale yellow in colour, sometimes resembling dirty water, and always foul-smelling. Wasting had become marked and the abdomen was constantly swollen. When admitted to hospital he appeared fairly well nourished and of healthy complexion. The abdomen was distended and flabby, easy to palpate and not tender. No peristalsis was seen. The stools were formed but pale, and frequently passed in bed owing to a degree of incontinence. Diarrhœa recurred in December, 1907, with very marked distension of the colon, and again in 1913. At this time the abdomen was greatly distended and visible peristalsis of the colon present. The stools were absolutely colourless, one *per diem*. There was no trace of (fatty acids) jaundice, and microscopical examination of the stools showed the presence of fatty acids, fats and soap. The stool was exceedingly frothy owing to the presence of gas bubbles throughout. In April, 1907, the child's weight was 1 st. 12 lb. 8 oz., and had increased by May to 2 st. 1 lb. 14 oz. On January the 14th, 1908, 2 st. 5 lb. 8 oz. In March, 1913, the weight was 3 st. 7 lb.

This concludes the clinical cases that we have brought forward, although there are several more under our observation of the same character which would only repeat the story. We wish now to emphasise once more that we have endeavoured to describe a group of cases of recurrent diarrhœa in childhood, which frequently seems to date its first onset from an attack of acute diarrhœa that, clinically, may resemble the acute enteritis so often met with in the summer.

Later, however, those characters have arisen which our examples have illustrated. To everyone it will occur that we are again describing a condition well recognised since the writings of Dr. Gee as that of coeliac disease, and this is the first point upon which we wish to dwell. To us it has seemed that "the coeliac disease," using the term in its usual sense, may very possibly be a phenomenon which, for the want of a better term, we would say is grafted upon the original illness. When some of these cases of ours were seen in the early stage they did not show the well-known characteristics, and several of them during the course of their long illnesses have passed green or blood-stained or brown fluid motions. Others, again, we admit, had from the first or nearly so passed motions of the character described in the coeliac affections, and there are others that do so from beginning to end of the illnesses. Our point is this, Does the coeliac affection represent a disease in itself, or is it the expression of some peculiar intestinal or other fault which may complicate various abdominal affections or be the result of some particular lesion that may arise in connection with various abdominal affections? Or

is it in part a result of an unsuitable diet in a disease which itself still persists although these special symptoms may disappear when the diet is corrected? Or, again, is it—following the line of thought suggested by Herter—the result of some peculiar bacterial flora acting upon disordered alimentary contents? There have been important writings upon cœliac disease which have approached the problem of its nature from different standpoints. Thus, Dr. Gee in bold outline sketched the salient features. Dr. Gibbons laid stress on the wide-spread derangement of function of the intestinal glands. Dr. Cheadle, impressed by the lack of colour and excess of fat in the stools, the abruptness of onset in some of the cases, together with the absence of jaundice, laid much stress upon the impaired function of the liver. Dr. Herter turned to the bacteriological problem and insisted upon the preponderance of a Gram-positive intestinal flora, which he associated peculiarly with the condition. Dr. Hutchison has emphasised the important bearing of diet.

We have been led to the same problem from yet another path by the study of this group of cases of recurrent diarrhœa in which we find ourselves coming upon phases in which we are unable to escape from the conclusion that we have arrived at the same goal as the writers we have mentioned.

The chief importance of our own contribution appears to us to lie in the results of the examination of the fatal case. The extensive lesions that were found are from every point of view of interest. We naturally ask ourselves whether, following our own line of thought, it is possible to find in them two distinct processes? Can we see some lesions which are the evidences of the recurrent and persistent diarrhœa, and others which bring about the cœliac symptoms? Are, for example, the chronic intestinal lesions the result of some particular infection—that of the bacillus of dysentery, for example (we must not, however, with the evidence at our disposal, do more than make the suggestion to illustrate our point)? On the other hand, are the changes in the liver a partial explanation of the cœliac symptoms? It is difficult, we imagine, to state how rapidly the extreme damage to the liver occurred in our fatal case, and quite possible that such changes are only evidence of a secondary toxæmia. On the other hand, we would point out that enlargement of the liver was repeatedly noticed in this case long before death, although it became more evident at the end. It does not, then, seem impossible that without necessarily any notable enlargement, there may be in these cases some peculiar poison damaging the hepatic function in some special way, but not causing any jaundice. Although acholia is now known

to be a term that is too committal, may not the condition of the liver nevertheless take a decided part in producing the cœliac symptoms?

The condition of the pancreas was, we must admit, somewhat a surprise. We had thought to have seen more extensive disease, but that there was some interlobular pancreatitis is a fact which is worth mentioning. It would be a mistake to lay overmuch stress upon a single record such as this one, but there is clear evidence in the histories of the recorded cases that peculiar poisons are present in these illnesses, producing such symptoms as tetany, anasarca,* neuritic pains and arthritic changes. They are sufficient, we feel, to make it justifiable to suggest that we have two factors to consider—the possible occurrence of a peculiar infection, and the appearance of special symptoms of the cœliac affection as a sequel, but not necessarily as a constant occurrence.

The standpoint we have taken has led us to adopt the title to our contribution that we have done, because we wish to ascertain whether the general opinion is that we are yet in a position to consider the cœliac affection as in itself a disease. If there is unanimity upon this, then we think the original term “cœliac disease” the safest as being the least committal. Later researches have shown that the colour of stercobilin may be masked by fat and bile, but is not necessarily absent from the white fæces, and on this account acholia pledges us too far, although, as we have mentioned, this term directs attention to the possible influence of disordered hepatic function.

Malabsorption is clearly a predominant feature in these illnesses, and we need not delay over the infantilism or extreme weakness of the lower extremities, or flatulent distension and general flabbiness and anæmia, for we think this is a sufficient explanation. It is an interesting point that a considerable number of cases after reaching the age of five to seven seem in a mysterious way to outgrow the tendency to recurrent attacks, and to gain step by step a tolerance to a more generous diet; and one wonders in such cases to what extent the bowels remain permanently damaged, and whether the liver or pancreas or both acquire in some way a greater vitality, and thus aid in overcoming the cœliac element.

The problem of the *diet* seems to us a very difficult one, for a study of our cases and of others we have not recorded seems to point to any of the chief articles of diet as being at one time or

* A recent fatal case which it is hoped to publish in brief at an early date confirmed the occurrence of definite ascites, non-tubercular in nature, in this condition.
—F. J. P.

another harmful, although we think Herter inclines to the carbohydrates as the first offenders. Fat seems to us to stand first as the most difficult, yet some cases may take cream. Carbohydrates may be tolerated better than any foods at times when the condition is almost desperate, but often they are ill-borne, and if pressed appear to assist in causing distension in which the entire bowel is implicated. Broths and meat-juices are, perhaps, as likely to be dealt with successfully as any food, but with milk the most diverse results occur. In some cases milk seems most injurious, in others it has been the great stand-by. The dried milks have often been of service. Eggs are frequently disastrous, and again fish has been most unsatisfactory, and minced meat equally so. The malted foods are very likely to produce diarrhœa. The wide-spread intestinal lesions prepare us to find that all forms of food may be difficult to assimilate. With us, in fact, it has been that in some cases a diet has been arrived at by bitter experience with the particular individual, and has been evolved quite empirically. We would add that diarrhœa is by no means an invariable symptom, for there may be also constipation, which may prove equally dangerous from consequent meteorism. Of all drugs, the one that seems to us after a prolonged experience to be the most generally successful is bismuth. We have had the most convincing proof of this in the fact that several mothers of much intelligence and unsparing in care of their children have come back asking for this when a relapse was threatening.

We do not pretend that it will cope with the worst cases, but it is, we believe, of the greatest value in the milder ones, although it is powerless to combat an unsuitable diet. Opium and grey powder have, as is well recognised, their times of value. And when the stage of convalescence is well established mild iron preparations are useful. The routine use of cod-liver oil and malt in the stages of remission may, in our opinion, precipitate an attack.

The remarkable tendency to great abdominal distension and the diagnosis in some of these cases of dilated colon raise the interesting question as to whether a condition allied to Hirschsprung's disease, or, indeed, whether some cases actually described as of this nature, are not to be ascribed to this peculiarly severe and chronic affection damaging the neuro-muscular elements of the bowel. The course of events we would picture, then, is that the active disease has quieted down, leaving a much weakened gut, and constipation has resulted. This constipation has been neglected or permitted at first as a lesser evil and thus added to the strain upon the weakened

bowel, with the result that an extreme degree of atony of some of the most affected part has resulted. The following history is a suggestive one in this connection :

L. W—, a boy, aged 6 years 4 months, had always been inclined to be constipated, but when 3½ years old had a prolonged attack of diarrhœa, passing slime and blood, after which the constipation became much more severe. Now the bowels are frequently not moved for a week, and even for three weeks or nearly a month. When constipated the abdomen gets very distended. The transverse colon is clearly enlarged, and the upper segment of the abdomen has the appearance of fulness which is not uncommon in Hirschsprung's affection. The report upon the bismuth meal confidently stated that the condition was characteristic of Hirschsprung's affection. Under persistent treatment large, hard masses of fæces are being passed, but it is too early to say what permanent improvement is going to result.*

The *diagnosis* from abdominal tuberculosis is not easy, and it is one of the valuable results of the examination of the fatal case that it proved conclusively that a condition at first considered more than once to be of a tubercular nature was undoubtedly non-tubercular. This particular point strikes us that the rapidity with which in this affection extreme illness is reached and the possibility of recovery from such an extreme condition on more than one occasion makes a clinical picture unlike that of abdominal tuberculosis. The absence of tubercular masses in the abdomen is also another fact of importance. *The occurrence in a few cases of general anasarca with ascites is very remarkable.* The fatal case also warns us against becoming stereotyped in our use of such terms in childhood as gastritis, gastroenteritis and colitis, for there was evidence here of an affection of the entire alimentary tract beyond the œsophagus.

Lastly, with regard to the bacteriology, it is clear that at present the results have been too diverse for us to see our way at all plainly although the accurate investigations recorded are suggestive. To us the peculiar recurrent alimentary disturbance suggests an infectiv-origin, but the acholia may very possibly be the result of none bacterial processes grafted upon the bacterial infection. The valuable investigations of Herter upon this point are of much interest, but at present we incline to the view that the coeliac element was not in our cases to be looked upon as the essential element in the illnesses, and we should state as further evidence in support of this that coeliac symptoms may develop abruptly in the course of a night after a

* After prolonged and most careful medical treatment the condition failed to mend to any degree, and in February of this year Sir W. A. Lane resected the bowel between the lower end of the ileum and pelvic colon. The operation was well borne, but as yet the ultimate result cannot be stated, and the wall of the large bowel has not yet been investigated.—F. J. P.

sudden chill (a point commented upon by the late Dr. Cheadle), without evidence at any time of such a form of diarrhœa as was met with in the cases related here.

Finally, we would emphasise that this contribution has been brought forward with the desire to learn both from the clinical and pathological side any facts that may assist us to deal with these exceedingly difficult cases more satisfactorily and understand their interpretation more clearly.

APPENDIX.—DIET.

A specimen of a full diet for a child aged 3 years with morbus cœliacus, upon which a gain of weight was obtained in Hospital:

Breakfast at 5 a.m.: Bread, 2 oz.; butter, 3 dr.; fat bacon, $\frac{1}{2}$ oz.; milk, 7 oz. Fat-free diet; Bread and jam, 2 oz.; weak tea with 2 lumps of sugar, 7 oz.

Lunch at 9 a.m.: Bread, 1 oz.; butter, 3 dr.; milk, 5 oz. Fat-free diet: Biscuits with jam, 2 oz.; lemonade, 7 oz.

Dinner at 12 noon: Mince, 4 oz.; pudding, 4 oz.; milk, 5 oz. Fat-free diet: Fish or mince with potato, 6 oz.; bread and jam, 2 oz.

Tea at 3.30 p.m.: Bread, 2 oz.; butter, 3 dr.; milk, 7 oz. Fat-free diet: Bread and jam, 2 oz.; weak tea, 7 oz.

Supper at 6 p.m.: Bread, 1 oz.; butter, 3 dr.; milk, 5 oz. Fat-free diet: Bread and jam, 2 oz.; lemonade, 7 oz.

One drink of milk at night of 7 oz.

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THE FOOD VALUE REQUIRED BY GROWING GIRLS,
AGED FOUR TO FIFTEEN. RESULT OF INVESTIGA-
TIONS CARRIED ON FOR SEVENTEEN YEARS,
WITH ANALYSES AND COMMENTS.

By J. GORDON SHARP, M.D.Edin.

IN the investigations about to be detailed the writer has had the opportunity of observing the results of feeding for over seventeen years a large number of girls of the neglected classes in an institution capable of housing thirty inmates. The dietary was constructed for the needs of the girls, or in other words, food was given in such quantity and of such quality as were likely not only to increase weight, but also to maintain health and vigour. When these ends were attained the results were noted. For various reasons economy was studied, but parsimony was not encouraged. The only guide and rule followed were that the children were to have enough to eat of suitable food.

Character of the children.—In almost all the instances the children had suffered want and neglect before they came under observation. Many of them had bad family histories in every sense of the word.

Surroundings.—When once admitted to the institution they were placed under hygienic conditions, and they were plentifully supplied with fresh air and appropriate clothing for cold and warm weather respectively. Hours of sleep were carefully attended to. Children were admitted from four years of age up to twelve or thirteen, but the admission of the children at the latter age was not encouraged because of the shortness of the training, for after the age of fifteen was reached the children were sent out to service, or they were sent to Canada to remove them as far as possible from old sources of contamination. They remained at school in the institution till the age of thirteen when they did work in the kitchen or laundry till the time of leaving. Exercise in the open air was regularly taken, wet or fine.

Each child was examined on admission, weighed, and the height noted, and at regular stated intervals the weight and height were taken during the entire period of stay in the institution. Most cases were admitted at the ages of seven and nine.

Health.—In all the seventeen years, only two deaths took place amongst the many children who had moved out and in during these years. One death was due to acute septicæmia and the other to acute appendicitis. Cases of chronic ill-health are unknown. Several epidemics of mild diphtheria, influenza and catarrhal colds occur, but

practically nothing else, except during the first few years in which the observations were carried on, when many cases of chilblains occurred every winter. Some of these were severe, ulcers forming and pieces of soft tissue even necrosing in one or two cases. For ten years no such case has been seen, and for the same period of time no child has been incapacitated from school or work, except from acute disease. The cause and prevention of this condition is discussed in another place and need not be further mentioned here.

One important point remains to be mentioned: progressive rickets is never seen. A child may be admitted with a tendency to this condition, but in a short time it disappears.

Gross Week's Food Supply for Thirty Girls, aged 4 to 15 years.

- (1) Twenty-one pounds (9·520 kgm.) meat free from bone.
- (2) Nine pounds (4·082 kgm.) fish, chiefly cod or hake.
- (3) One hundred and forty-four pounds (65·310 kgm.) of white flour.
- (4) Forty-nine pounds (22·226 kgm.) of potatoes.
- (5) Fourteen pounds (6·350 kgm.) margarine.
- (6) Four pounds (1·814 kgm.) rice, sago or tapioca.
- (7) Two pounds (0·907 kgm.) raisins or currants.
- (8) Fifteen pounds (6·804 kgm.) sugar.
- (9) Six pounds (2·722 kgm.) *each* of pearl barley, peas and beans.
- (10) Forty-nine pounds (22·226 kgm.) of a mixture of cabbage, carrots, cauliflowers.
- (11) Half a pound (0·277 kgm.) tea.
- (12) Three pounds (1·361 kgm.) cocoa.
- (13) One hundred and five pints, equal to 131 pounds or 59·421 kgm. of new milk.
- (14) Eight pounds (3·629 kgm.) jam or syrup.
- (15) Six pounds (2·722 kgm.) oatmeal.
- (16) Four pounds (1·814 kgm.) liver.
- (17) One pound (0·454) bacon.
- (18) Two pounds (0·908 kgm.) suet.

These quantities may be increased on occasions by fruit grown in the garden, or by gifts from friends in the shape of jam, cream, fruit and so on. The list, too is varied from time to time to obviate monotony, but the food value is never allowed to get lower than as stated later on. In cold weather a little extra fat is thrown in, and in hot weather the fat and animal protein are lessened and the carbohydrate is increased, as is done in every well-regulated dietary.

Calculations made from the food list show that the daily average intake for each child is: *Protein*, 56 grm.; *fat*, 51 grm.; *carbohydrate*, 259 grm., or calories 1817 or nitrogen 8.90 grm., carbon 168 grm., or 1 nitrogen to 18.8 carbon.

In view of recent pronouncements, it will be observed that the protein is comparatively large, but it is felt that not a gramme too much has been given. The fat content too, is, comparatively large. The carbohydrate is comparatively small in amount, but it is evidently sufficient, as will be seen from the results of the weighings.

Nine months' experience with standard flour instead of ordinary flour.—During the time when the use of standard flour (80 per cent.) was so much advocated as a feeding stuff, the writer was asked if it might be substituted instead of the ordinary white flour, which had been in use for fifteen years. It was tried for nine months, the writer having no hand or interest in the experiment. The children were weighed and observed, but no difference was noted in either weight or health, and the use of the standard flour was gradually dropped by those who had urged its adoption. The employment of standard flour lowered the caloric value of each child's daily food content by about 70 calories, so that what was gained in lecithin or other organic phosphorus constituent was lost in actual feeding properties. There was really no gain at all, since there was never any reason to believe that the organic phosphorus content was other than what was equal to the maintenance of health and vigour.

HOW THE FOOD STUFFS ARE PREPARED—DIETARY FOR THE WEEK.

Sunday.

Breakfast.—All children under nine have porridge and milk with bread and syrup or jam. Children over nine have cocoa or tea with plenty of milk, bread, margarine, syrup or jam.

Dinner.—Same for all—beef-pie, potatoes, vegetables and milk pudding—rice, sago or tapioca—and fruit in season.

Tea.—Same for all. Cocoa or tea with plenty of milk, bread, butter, margarine, jam.

If the elder girls have to be up late they are allowed bread and cocoa. On Sunday, the protein intake as well as the fat and carbohydrate are comparatively large.

Monday.

Breakfast.—As on Sunday.

Dinner.—Barley soup made from good stock and containing

plenty of vegetables, with suet pudding containing currants or raisins, with potatoes.

Tea.—Really cocoa of a good quality. Plenty of bread with margarine, syrup or jam.

The nitrogen intake is small on this day (only about 6 grm.) while the carbon is large.

Tuesday.

Breakfast.—Porridge and milk with bread and syrup.

Dinner.—Meat stew, vegetables, potatoes and milk pudding.

Tea.—Cocoa, as on Monday.

Protein intake nearly equal to average (8 grm.), fat intake much above average.

Wednesday.

Breakfast.—Same as Sunday.

Dinner.—Pea soup, made from rich stock and containing a variety of vegetables with suet pudding containing currants or raisins, and potatoes.

Tea.—Same as Monday.

Protein intake below average, fat also below, carbohydrate much above.

Thursday.

Breakfast.—Same as Tuesday.

Dinner.—Liver and bacon with potatoes, vegetables, and rice or sago milk pudding.

Tea.—Same as Tuesday.

Protein intake average, fat above, carbohydrate average.

Friday.

Breakfast.—Same as Sunday.

Dinner.—Fish (cod or hake), potatoes, vegetables, dumplings served with syrup or jam.

Tea.—Same as Monday.

The dietary of this day contains the smallest protein, fat and carbohydrate content, and in consequence the smallest number of calories of all the week.

Saturday.

Breakfast.—Same as Tuesday.

Dinner.—Bean soup with vegetables, potatoes and suet puddings, with bread and syrup or jam if desired.

Tea.—Same as Tuesday.

The protein is small in amount, the fat equal to the average, and the carbohydrate high, making a large total of calories.

One of the objects of the dietary was to vary the intakes of protein, fat, and carbohydrates. Whenever meat was not given vegetable protein was substituted. This was greatly relished by the children, and the bean or pea soup dinner day is always a favourite day. In summer the meat is cut down and an equivalent of eggs given. A large quantity of fresh fruit and vegetables (grown in the garden) are consumed. This makes the cost of feeding much smaller.

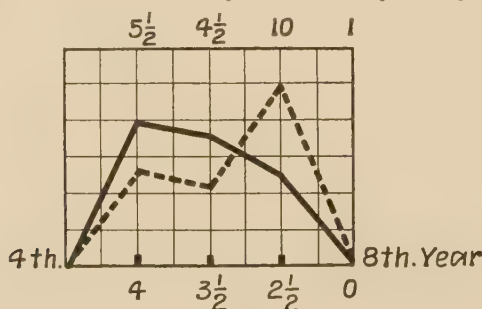
Margarine is used instead of butter and its cheapness is an advantage. No child is to have less than one ounce daily; the actual amount is 30·23 grm.—rather more than an ounce. The bread is home-baked, compressed fresh yeast being employed. This probably has a salutary effect on the health of the children.

Average weekly cost of feeding each child.—This is found to be two shillings and sixpence (up to 1911) exclusive of vegetables and fruit, otherwise than those given in the average weekly list of food-stuffs.

Proof of the adequacy of the food.—In the series of tables, the weight and height of the child are shown when she came into the Home, and then for a series of years till she left, the records of weight and height always being taken at the same time of the year, and, in fact, as near as possible under similar conditions in every way. As will be observed, in almost every case in which the child was equal to the averages or above the averages these were maintained as long as the girl remained in the Home, showing that the food was in every way adequate. But one may claim more than this for the dietary, for children who came in below the averages often left with records equal to or above the averages.

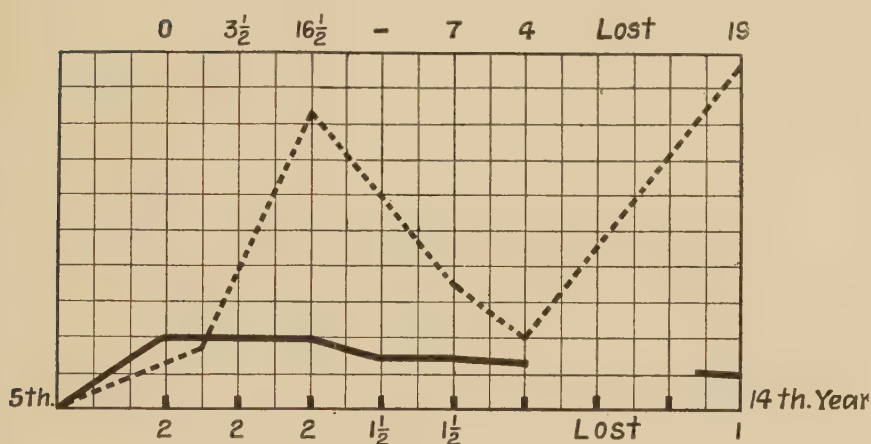
(Quetelet's averages are here accepted.)

Girl A.—Observation from 4 to 8 years of age.



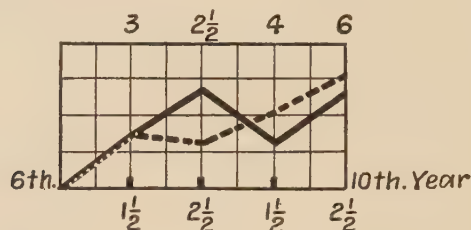
Weight.				Height.			
Above average on admission.				Above average on admission.			
	st.	lb.	kgrm.		ft.	in.	mm.
Age 4	2	6	15.42	.	3	1	940
„ 5	2	11½	17.75	.	3	5	1040
„ 6	3	1	19.52	.	3	8½	1130
„ 7	3	11	24.04	.	3	11	1194
„ 8	3	12	24.50	.	3	11	1194
Above average on leaving.				Also above average on leaving.			

Girl B.—Observation from 5 to 14 years of age.



Above average on admission.				Above average on admission.			
	st.	lb.	kgrm.		ft.	in.	mm.
Age 5	2	11½	17.91	.	3	3½	1003
„ 6	2	10	17.23	.	3	5½	1059
„ 7	2	13½	18.80	.	3	7	1092
„ 8	3	2	19.97	.	3	9	1143
„ 9	3	9	23.14	.	3	10½	1181
„ 10	3	13	24.95	.	4	1	1244
„ 11	Lost		Lost	.	Lost		Lost
„ 12				.			
„ 13	4	7	28.57	.	4	5	1345
„ 14	5	12	37.20	.	4	6	1372
Above average on leaving.				Below average (4 inches).			

208 FOOD VALUE REQUIRED BY GROWING GIRLS.

Girl C.—Observation from 6 to 10 years of age.

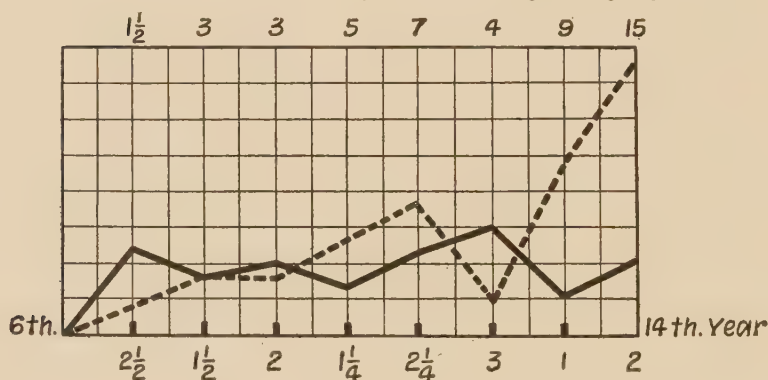
Below average on admission.

Above average on admission.

Age	6	7	8	9	10	st. lb.	kgm.	ft.	in.	mm.
	2	2	2	3	3	4½	14·74	3	6	1066
						7½	16·11	3	7½	1104
						10	17·25	3	10	1168
						0	18·85	3	11½	1207
						6	21·33	4	2	1269

Below—2 lb. below as against 3½
on admission.

Above average on leaving.

Girl D.—Observation from 6 to 14 years of age.

Equal to average on admission.

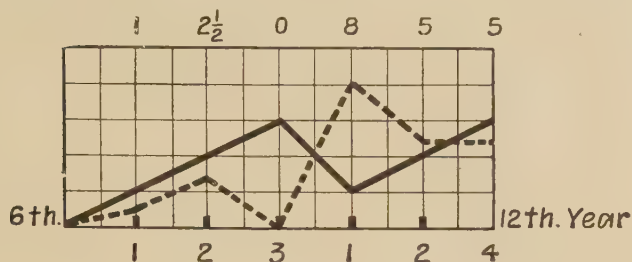
Below average on admission.

Age	6	7	8	9	10	11	12	13	14	st. lb.	kgm.	ft.	in.	mm.
	2	2	2	3	3	4	4	4	6	8½	16·55	3	1½	953
										10	17·24	3	4	1016
										13	18·59	3	5½	1059
										2	19·97	3	7½	1104
										7	22·10	3	8¾	1130
										0	24·95	3	11	1194
										4	27·22	4	2	1269
										13	31·30	4	3	1295
										0	37·08	4	5	1346

Above average on leaving.

Below average on leaving.

Girl E.—Observation from 6 to 12 years of age.



Equal to average on admission.

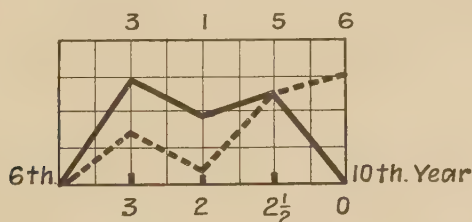
One inch above average on admission.

		st.	lb.		kgm.		ft.	in.		mm.	
Age	6	.	2	7½	.	16·11	.	3	5	.	1042
„	7	.	2	8½	.	16·78	.	3	6	.	1066
„	8	.	2	11	.	17·69	.	3	8	.	1117
„	9	.	2	11	.	17·69	.	3	10	.	1165
„	10	.	3	5	.	21·33	.	3	11	.	1194
„	11	.	3	10	.	23·59	.	4	1	.	1244
„	12	.	4	1	.	25·42	.	4	5	.	1346

Six pounds above average on leaving.

One inch above on leaving.

Girl F.—Observation from 6 to 10 years of age.



Equal to average on admission.

Half inch below on admission.

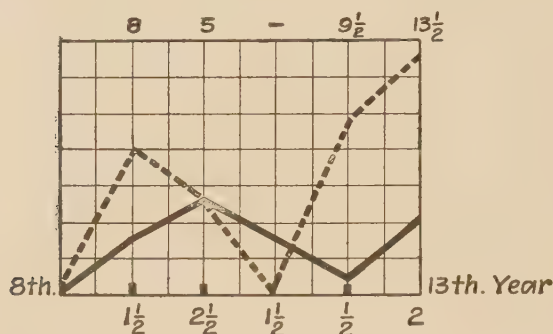
		st.	lb.		kgm.		ft.	in.		mm.	
Age	6	.	2	8	.	16·33	.	3	3½	.	1003
„	7	.	2	11	.	17·69	.	3	6½	.	1092
„	8	.	2	12	.	18·14	.	3	8½	.	1130
„	9	.	3	3	.	20·41	.	3	11	.	1194
„	10	.	3	9	.	23·14	.	3	11	.	1194

One pound above on leaving.

Two inches below on leaving.

210 FOOD VALUE REQUIRED BY GROWING GIRLS.

Girl G.—Observation from 8 to 13 years of age.

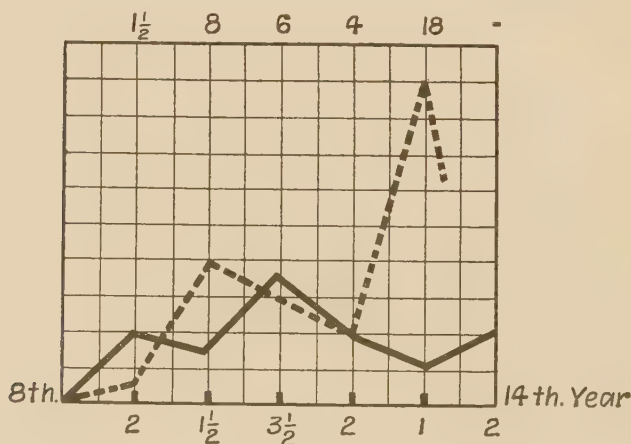


One pound below on admission. Equal to average on admission.

		st. lb.		kgm.		ft. in.		mm.
Age	8	2 12	.	18.14	.	3 9	.	1143
"	9	3 6	.	21.73	.	3 10½	.	1180
"	10	3 11	.	24.04	.	4 1	.	1244
"	11	3 10	.	23.59	.	4 2½	.	1282
"	12	4 5½	.	27.89	.	4 3	.	1292
"	13	5 5	.	33.03	.	4 5	.	1346

Four pounds above on leaving. Two inches below on leaving.

Girl H.—Observation from 8 to 14 years of age.



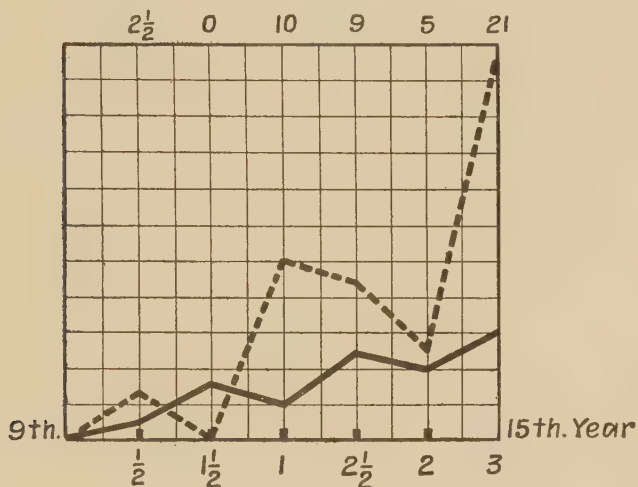
Equal to average on admission. Two inches below on admission.

		st.	lb.		kgm.		ft.	in.		mm.
Age	8	.	2 11½	.	17.75	.	3	7	.	1092
„	9	.	2 13	.	18.59	.	3	9	.	1143
„	10	.	3 7	.	22.10	.	3	10½	.	1180
„	11	.	3 13	.	24.95	.	4	2	.	1269

	st.	lb.		kgrm.		ft.	in.		mm.
Age 12	.	4 3	.	26.77	.	4	4	.	1308
„ 13	.	5 7	.	34.92	.	4	5	.	1346
„ 14	.	5 6	.	34.48	.	4	7	.	1397

Three pounds below on leaving. Three inches below on leaving.

Girl I.—Observation from 9 to 15 years of age.



One and a half pounds above on admission.

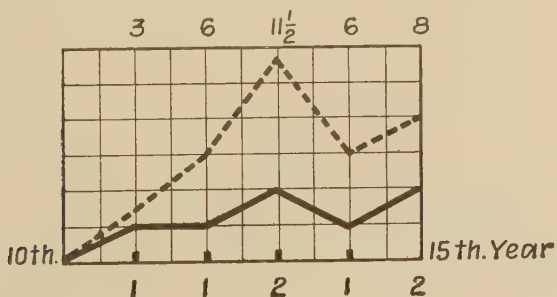
Equal on admission.

	st.	lb.		kgrm.		ft.	in.		mm.
Age 9	.	3 5½	.	21.55	.	3	11½	.	1207
„ 10	.	3 8	.	22.46	.	4	0	.	1218
„ 11	.	3 8	.	22.46	.	4	1½	.	1236
„ 12	.	4 4	.	27.22	.	4	2½	.	1282
„ 13	.	4 13	.	31.30	.	4	5	.	1346
„ 14	.	5 4	.	32.58	.	4	7	.	1397
„ 15	.	6 11	.	43.08	.	4	10	.	1473

Seven pounds above on leaving.

Equal on leaving.

Girl J.—Observation from 10 to 15 years of age.



212 FOOD VALUE REQUIRED BY GROWING GIRLS.

Six and a half pounds below on admission.

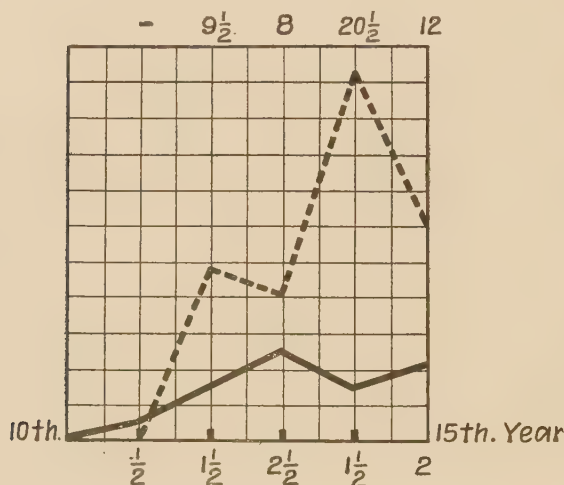
Four inches below on admission.

			st.	lb.		kgm.		ft.	in.		mm.
Age	10	.	3	1 $\frac{1}{2}$	.	19.74	.	3	9	.	1143
„	11	.	3	4 $\frac{1}{2}$	.	21.10	.	3	10	.	1168
„	12	.	3	10 $\frac{1}{2}$	.	23.81	.	3	11	.	1194
„	13	.	3	12	.	24.50	.	4	1	.	1244
„	14	.	4	4	.	27.22	.	4	2	.	1269
„	15	.	4	12	.	30.85	.	4	4	.	1308

Twenty pounds below on leaving.

Six inches below on leaving.

Girl K.—Observation from 10 to 15 years of age.



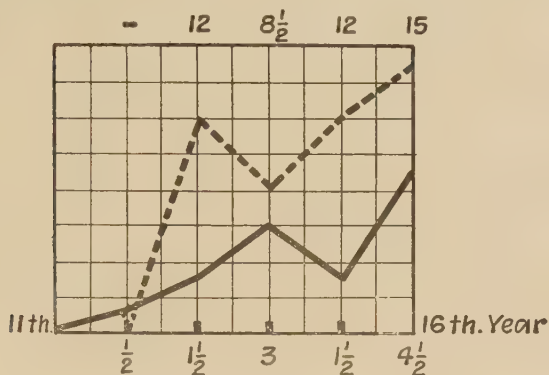
Twelve and a half pounds above on admission.

Four inches above on admission.

		st.	lb.		kgm.		ft.	in.		mm.	
Age	10	.	4	6 $\frac{1}{2}$	.	28.57	.	4	5	.	1346
	„	.	4	6	.	28.12	.	4	5 $\frac{1}{2}$	.	1352
	„	.	5	1 $\frac{1}{2}$	.	32.44	.	4	7	.	1397
	„	.	5	9 $\frac{1}{2}$	.	36.05	.	4	9 $\frac{1}{2}$	.	1461
	„	.	7	2	.	45.36	.	4	11	.	1499
	„	.	8	0	.	50.80	.	5	0	.	1524

Twenty-four pounds above on leaving. Two inches above on leaving.

Girl L.—Observation from 11 to 16 years of age.



Three and a half pounds below on admission.

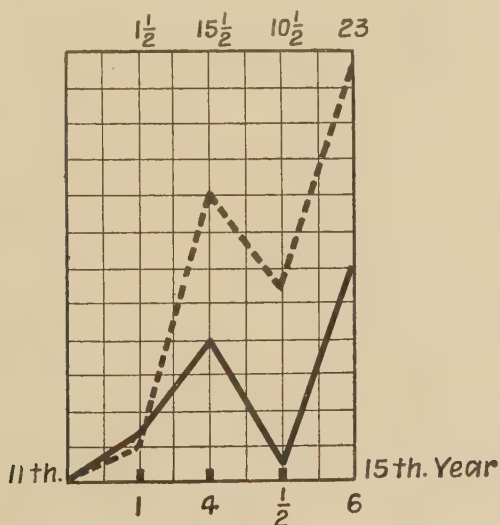
Equal to average on admission.

	st.	lb.		kgm.		ft.	in.		mm.
Age 11	.	3 10 1/2	.	23.81	.	4	2	.	1269
„ 12	.	3 8 1/2	.	22.68	.	4	2 1/2	.	1282
„ 13	.	4 6 1/2	.	28.34	.	4	4	.	1308
„ 14	.	5 1	.	32.21	.	4	7	.	1397
„ 15	.	5 13	.	37.65	.	4	8 1/2	.	1423
„ 16	.	7 0	.	44.45	.	5	1	.	1549

Three pounds above on leaving.

Two inches above on leaving.

Girl M.—Observation from 11 to 15 years of age.



Three and a half pounds below on
admission.

		st.	lb.	kgrm.
Age	11	.	3 10½	. 23·81
	12	.	3 12	. 24·50
	13	.	4 13½	. 31·52
	14	.	5 9	. 35·83
	15	.	7 4	. 46·27

Five inches below on
admission.

	ft.	in.	mm.
	3	9	. 1143
	3	10	. 1168
	4	4	. 1269
	4	2½	. 1282
	4	8½	1423

Fourteen pounds above on
leaving.

One and a half inches below
on leaving.

In order to make the matter clearer I have charted each child's annual variations in height and weight while under observation, all being drawn to scale.

The Charts show the yearly increase in stature and in weight.

The divisions of the base-line represent years. The dotted line and the top row of figures refer to pounds. One pound = nearly $\frac{1}{16}$ kilogram. The continuous line and the bottom row of figures refer to inches. One inch nearly = 25 millimetres.

(To be continued.)

CONGENITAL FAMILIAL CHOLÆMIA WITHOUT SPLENOMEGALY.

By GORDON R. WARD, M.D.

THE patient, K. S—, aged 15 years, was under the care of Dr. Young, of Boxmoor, and when seen by the writer was said by her mother to be "delicate," but was at work as a brush-maker, and complained of no disability. She was well formed and nourished. Her previous history showed that she had been yellow at or shortly after birth, apparently from icterus neonatorum, and had suffered from "convulsions" from the age of three weeks for three months. She had been more yellow than she was at the time of examination, and had occasionally suffered from pain in the right side. Otherwise nothing of note. Several medical men had seen her, according to her story, and had noted that she was yellow. Dr. Young had examined her urine on more than one occasion, but found nothing abnormal.

On examination it was noted that her sclerotics were distinctly yellow, while her skin was of a dusky yellowish-brown colour, not definitely pigmented, nor yet of the lighter yellow, almost primrose, colour usual in these cases. She tolerated abdominal palpation much more readily than many patients, but neither liver or spleen was palpable, nor did percussion show any enlargement of either organ.

Her mother and her maternal uncle were also examined, and both showed massive splenomegaly and anæmia. The blood conditions of the three were as follows :

	Patient.	Uncle, aged 42 years.	Mother, aged 34 years.
Red cells . . .	4,285,000 . . .	2,222,500 . . .	1,755,000.
Hæmoglobin . . .	79 per cent. . .	52 per cent. . .	38 per cent.
Colour index . . .	0·929 . . .	1·181 . . .	1·085
Nucleated red cells .	Two seen . . .	None seen . . .	872 per c.mm.
Saline hæmolytic—			
Commencing . . .	0·5 per cent. . .	0·6 per cent. . .	0·55 per cent.
Complete . . .	0·5 per cent. . .	0·5 per cent. . .	0·5 per cent.
Polychromasia . . .	Very marked . . .	Very marked . . .	Very marked.
Anisocytosis . . .	Much increased . . .	Much increased . . .	Very much increased.
White cells . . .	14,800 . . .	7900 . . .	7928
Polymorphs . . .	71·4 per cent. . .	77·8 per cent. . .	57·0 per cent.
Eosinophiles . . .	1·8 per cent. . .	1·8 per cent. . .	1·2 per cent.
Mast-cells . . .	0·2 per cent. . .	0·8 per cent. . .	0·2 per cent.
Transitionals . . .	2·8 per cent. . .	3·2 per cent. . .	3·0 per cent.
Small mononuclears .	23·0 per cent. . .	15·6 per cent. . .	35·6 per cent.
Large mononuclears .	0·8 per cent. . .	0·8 per cent. . .	1·6 per cent.
Myelocytes . . .	None seen . . .	None seen . . .	1·4 per cent.

These blood examinations are typical of cholæmia, and the physical examinations of the patients left no doubt as to the diagnosis.

It is of interest that the mother did not think that her daughter suffered from the same disease as herself, and was with difficulty persuaded to bring her for examination. I was unable to examine any other members of the family, although I saw the grandmother, who was not jaundiced. She stated that she had no knowledge of the disease in her family, except in her son and daughter.

The patient had six brothers and sisters ; generally speaking, cholæmia families, like chlorosis families, are large. Of the six a few facts were available :

No. 1, female, the eldest, died of pneumonia, aged three months ; No. 2, the patient, aged 15 years ; No. 3, female, aged 13 years, never yellow nor ill ; No. 4, male, died, aged 13 days, cause of death unknown ; No. 5, female, aged 5 years, never yellow nor ill ; No. 6, male, died, aged three hours ; No. 7, female, aged 2 years, never yellow nor ill.

Although cholæmia without splenomegaly is not unknown, it has some interest both from the point of view of treatment and theoretically. Splenectomy is becoming well recognised as a method of treatment. Suppose this patient should later on develop severe anæmia or frequent pain, would it be justifiable to remove the spleen, although it were not normal in size ? Again, the success of splenectomy is often quoted as proof that the primary fault resides in the spleen.

He had recently passed segments of a tapeworm and probably still harboured the head.

CASE 2.—Son of the above, aged 15 years. Patient had had chickenpox, measles and whooping-cough at the age of six, and diphtheria when aged nine. With the exception of the indeterminate illness three years ago he had not been ill since, though he had been noticed to be pale. He had never suffered from worms. The boy showed a moderate grade of anæmia; his spleen was firm and considerably increased in size, though it was not quite so large as that in Case 1. The liver and lymphatic glands were not enlarged.

CASE 3.—Daughter, aged 13 years. She had had chickenpox, measles and whooping-cough at the same time as her brother, and acute rheumatism four years ago, which left no cardiac lesion. Three years ago she had the illness already referred to. In December last she had a second attack of acute rheumatism, which was followed by pneumonia, and now had incompetence of the mitral valve. She had never had worms. She showed a marked degree of anæmia and was much paler than she was before her recent illness. The spleen was firm and enlarged to beyond the middle line and almost to the level of the umbilicus; it was now a little larger than it was two months ago. There was no enlargement of the liver or lymphatic glands.

BLOOD-COUNT.

	December the 5th.	February the 4th.	
Red cells	2,210,000	1,536,000	per c.mm.
White cells	9,500	13,600	"
Hæmoglobin	—	35.0	per cent.
Polymorphonuclears	68.0	64.5	"
Lymphocytes (small)	15.0	14.0	"
" (large)	4.2	6.2	"
Eosinophiles	9.1	9.1	"
Myelocytes	2.0	3.0	"
Mast-cells	2.0	2.0	"
	No normoblasts.	No normoblasts.	
	No poikilocytes.		

CASE 4.—Daughter, aged 9 years. She had had chickenpox and measles at the same time as the other children, and meningitis four years ago. She has also had two or three attacks of acute rheumatism and the heart showed evidence of a mitral lesion. Three years ago she had the same febrile illness as her father and elder brother and sister. There was no history of worms. She was distinctly anæmic and presented a moderate enlargement of the spleen, its size being about the same as that of Case 2. Like the other cases, she showed no hepatic or lymphatic hypertrophy.

BLOOD-COUNT.

	December the 5th.	February the 4th.	
Red cells	2,320,000	2,024,000	per c.mm.
White cells	8,500	10,800	"
Hæmoglobin	—	2.0	per cent.
Polymorphonuclears	73.5	66.0	"

	December the 5th.	February the 4th.
Lymphocytes (small)	14.0	14.0 per cent.
" (large)	6.0	9.0 "
Eosinophiles	6.0	8.0 "
Myelocytes	—	1.0 "
Mast-cells	0.5	1.0 "
	No normoblasts.	No normoblasts.
	No poikilocytes.	

In addition to the patients shown the family consisted of the mother and three other children; two girls, aged 11 and 6 years respectively, and a boy, aged 3 years, all of whom were healthy. None of these suffered from the febrile illness three years ago.

Case of Splenic Anæmia treated by Splenectomy.—Dr. HERBERT FRENCH and Mr. PHILIP TURNER.—A boy, aged 5 years, was admitted to Guy's Hospital on March the 31st, 1912, in a very weak, pale, drowsy condition; he was very anæmic and, at the same time, suffering from bronchitis. The spleen was found to be very enlarged, reaching across to the middle line and down to the iliac crest; the liver was moderately enlarged, smooth and soft. Several blood-counts were made, the following figures being about the average: White corpuscles, 21,000; red corpuscles, 1,900,000; hæmoglobin, 20 per cent. The diagnosis that was made was pseudo-leukæmia infantum of the von Jaksch's type. The Wassermann reaction was positive on several occasions, and the patient's sister was now affected by a precisely similar malady. Previous to his admission he had repeatedly been an in-patient in various hospitals, where he had received treatment by iron, arsenic, mercury, iodide of potassium, salvarsan injections, and the use of the X rays locally over the spleen, but all without any marked benefit. From 9 months to 5 years of age the patient had been a yellow, anæmic, frail little boy, unable to be long out of bed; his general appearance was that of a patient in an advanced stage of pernicious anæmia. As all other treatment had failed to bring about improvement in the condition, it was finally decided on September the 26th, 1912, to excise the spleen. This organ, on removal, weighed 18 oz., and measured 7 in. in length and 5 in. in width. An immediate progressive and remarkable change for the better took place, and in two months' time the boy looked perfectly normal. Since this operation he had had both scarlet fever and measles, and now was able to go to school. Apparently he had been quite cured by the splenectomy, had 85 per cent. of hæmoglobin, and was having no medicines at all.

Case of Splenic Anæmia treated by Splenectomy.—Mr. PERCY SARGENT.—Girl, aged 10 years. Comparatively well until November, 1912, when the abdomen was noticed to be enlarging. In November she was found to have ascites and slight pyrexia. Abdomen opened on the supposition that the case was one of tuberculous peritonitis. Much clear fluid escaped; nothing abnormal felt. A fortnight later edge of spleen felt; no fluid detected. From this time onward spleen rapidly enlarged and by December the 31st could be felt below umbilicus.

Blood-count: Erythrocytes, 4,300,000; hæmoglobin, 40 per cent.; colour index, 0.5; moderate poikilocytosis; fair number of normoblasts; white cells, 2000; polynuclear neutrophiles, 63 per cent.; small lymphocytes, 33 per cent.; large lymphocytes, 3 per cent.

On January the 12th, 1913, the spleen was removed by Mr. Sargent through a para-median incision. It was extremely friable, and after removal weighed 1 lb. There were no inflammatory adhesions. Hæmorrhage was not excessive. Although the main vessels were tied at an early stage, several large veins at the upper part gave rise to trouble and necessitated the leaving on of three pairs of artery forceps. The child made an uninterrupted recovery. Six weeks later a severe hæmatemesis occurred and she was admitted to St. Thomas's Hospital. She was very pale; edge of liver palpable; pulse averaged 100; blowing apical systolic murmur; urine normal.

Blood-count: Erythrocytes, 2,936,250; hæmoglobin, 30 per cent.; colour index, 0·5; ghosts, microcytes, and macrocytes present; very large number of normoblasts; white cells, 29,260; polynuclear neutrophiles, 55·25 per cent.; small lymphocytes, 40·25 per cent.

For the next few weeks she had irregular pyrexia and a varying amount of diarrhœa. Treated with liquor arsenicalis.

Blood-count when discharged: Erythrocytes, 3,028,125; hæmoglobin, 35 per cent.; colour index, 0·6; very few normoblasts; white cells, 9100; polynuclear neutrophiles, 59·75 per cent.; small lymphocytes, 18·25 per cent.; large lymphocytes, 18·25 per cent.

Splenectomy for Congenital Acholuric Jaundice.—Dr. J. H. THURSFIELD.—The patient was aged 9 years, when he was first seen in the early part of 1902. He had always been of a yellowish colour, though the parents were unable to state whether the tint had been noticed actually at birth. He was admitted to the Hospital for Sick Children for anæmia and shortness of breath; his heart was considerably dilated and there was a harsh systolic murmur audible over the præcordia. The liver was palpable 1 in. below the costal margin and the hard smooth spleen reached to within 1 in. of the iliac crest. His erythrocytes were 1,460,000 per cubic millimetre and his hæmoglobin 30 per cent. The fæces contained plenty of bile-pigment, while the urine, though of a dark colour, contained none. On several occasions a well-marked urobilin band was seen by the spectroscope. The cerebro-spinal fluid did not contain bile, nor did the serum of the blood on the only occasion on which it was examined. A Wassermann test was negative.

The patient improved for a short time, but was readmitted in August, 1912, more anæmic and exhausted than before. His erythrocytes were now only 1,097,000 per cubic millimetre and his hæmoglobin had sunk to 20 per cent. The fragility of his corpuscles to solutions of saline was found to be considerably in excess of the normal; hæmolysis began in a 65 per cent. dilution.

Since the boy was obviously in danger and showed no signs of improvement, Mr. Tyrrell Gray removed the spleen. At the operation three spleniculi were seen and left untouched. The spleen was firm and hard, and when squeezed free of blood weighed 597 grm. After the operation there was the usual leucocytosis, but at the end of ten days this had disappeared, and three weeks later the boy had entered on a steady course of improvement. The yellow tint disappeared and the erythrocyte count began to move upwards. The fragility of his erythrocytes, however, remained somewhat greater than the normal. Nine months after the operation his erythrocytes were 5,186,000 per cubic millimetre and his hæmoglobin 95 per cent. The fragility was still a little greater than normal. At the present time, sixteen months after the operation, he was in excellent health, with no signs of the

disease. His red blood-corpuscles were 5,000,000 per cubic millimetre and his hæmoglobin 100 per cent. The standard of fragility was now absolutely normal.

Case of Splenic Anæmia treated by Splenectomy.—Dr. GEOFFREY HOFFMANN (for Dr. H. P. HAWKINS).—Girl, aged 12 years. She was shown to the Section in November, 1911, before the spleen was removed. At the age of four she had suddenly vomited half a pint of blood, and when aged six years she had a second hæmatemesis of one pint. Early in 1910, at the age of eight, she began to have frequent attacks of pain in the stomach and around the heart. Crops of small purpuric spots appeared on the chest, and she is said to have bruised easily. Epistaxis occurred on one occasion.

She was admitted into St. Thomas's Hospital in April, 1910, when melæna was noticed on several successive days. The spleen projected $2\frac{1}{2}$ in. below the costal margin, and was indurated. Red cells were 2,425,000; colour index 0·7; leucocytes were 3700. Coagulation-time was two minutes five seconds. Some improvement took place after a month of arsenic. Henoch's purpura was diagnosed at this time.

She remained fairly well, though always pale, until July the 27th, 1911, when she suddenly vomited a pint of blood. This was repeated twice during the next few hours, and melæna was seen on nine successive days. The spleen was enlarged and firm as before, and moved freely with respiration. Red cells were 2,200,000; colour index, 0·5; leucocytes, 2980, with no change in the relative proportions. The condition of the blood slowly improved under arsenic, and in November, 1911, the red cells numbered 4,328,000 and the colour index was 0·8. The liver was just palpable, though not hard. Jaundice had never occurred. She had another large hæmatemesis on December the 18th, 1911.

The spleen was removed by Mr. Makins on January the 31st, 1912. There was little shock from the operation, and the wound healed by first intention. Just before operation the red cells were 4,400,000, hæmoglobin 90 per cent., and leucocytes 3,060. Three days later red cells were 3,620,000; colour index, 0·8; leucocytes, 43,480; 85 per cent. were polymorphonuclear cells and 4 per cent. small lymphocytes. The spleen showed perisplenitis and cirrhosis. Cultures were sterile on all media.

On February the 9th, red cells were 3,540,000; colour index 0·8; and leucocytes, 12,740; 55 per cent. polymorphonuclears; eosinophiles, 4·6 per cent.; small lymphocytes, 18·4 per cent.; large lymphocytes, 5·6 per cent.; large hyaline cells, 15 per cent.

In December, 1912, the patient was readmitted for tonsillectomy, and the blood examination then showed: Red cells, 6,100,000; hæmoglobin, 100 per cent.; leucocytes, 9520; small lymphocytes, 47 per cent.; polymorphonuclears, 32 per cent.; eosinophiles, 11·5 per cent.; large lymphocytes, 5·5 per cent.; large hyaline, 2·5 per cent.

In May, 1913, red cells were 4,500,000; hæmoglobin, 90 per cent.; leucocytes, 13,420. The relative proportions of the latter were similar to those in the last blood examination.

Since the operation she had been in good health and there had not been any more bleeding.

Philadelphia Pediatric Society.

February the 10th, 1914, WILLIAM N. BRADLEY, M.D., President.

Pseudo-Membranous Laryngitis, Non-Diphtheritic.—Dr. ELEANOR C. JONES showed a cast of the lower part of the larynx and upper part of trachea from a boy of 13½ months. Autopsy showed this cast-like material to line the entire trachea, lower larynx and bronchi as far as it was followed. It was white and fibrous above, soft and mucoid below. There was no membrane in the pharynx or on the tonsils. Beginning broncho-pneumonia was found in the lungs. Cultures from the throat and smears from the secretion in the trachea showed pneumococci, micrococci catarrhales, Gram-negative staphylococci, but no Klebs-Loeffler bacilli. The clinical diagnosis was laryngeal diphtheria, until corrected by the laboratory. The site for the diphtheroid membrane was unusual, and the organisms found were mainly pneumococci. The suprarenal glands were very pale, confirming the non-diphtheritic diagnosis. No blood-cultures were made nor was antitoxin given.

Dr. B. F. ROYER, of Harrisburg, said that he had frequently found cultures positive if taken from the lower end of the intubation tube when removing it, even though no positive cultures had been obtained from throat or vicinity of the larynx previously. Non-diphtheritic membranes were more commonly due to pneumococci than to streptococci. Dr. Royer also referred to a case of tracheal and bronchial diphtheria, the patient dying upon the operating table in Jefferson Hospital, and the specimens being in the museum of that institution, where a complete cast of pseudo-membrane began at the third tracheal rung and extended throughout the smallest bronchi. The diagnosis was only made at autopsy.

Quarantining Hospital Wards for Measles.—Dr. E. E. GRAHAM desires the present quarantine regulations for measles modified if possible. He considers measles very contagious, the contagion lasting from the earliest catarrhal symptom to the fading of the rash. Fifty per cent. occur during the first five years of life; 40 per cent. in the next five years. All children almost invariably, if not protected by a previous attack, contract it. It is dangerous in the very young and delicate infant. There is little danger in robust children over four years, if properly treated. 80 per cent. of deaths occur in children under five years. The contagion is short lived outside the body. It is a contact disease, and is less likely to be carried by a third person than is scarlet fever or diphtheria. Second attacks are rare. By closely watching exposed children Koplik's spots can usually be detected from one to three days before the rash and the child removed before it becomes a very active source of infection. Measles occurs in epidemics separated by periods of two, three or four years. All exposed children in schools and communities contract it and the epidemic ceases, only to reappear when a large number of children, not previously exposed, are again affected in a fresh epidemic. During an epidemic cases of measles are apt to occur in all wards to which children are admitted. Consequently these wards are often quarantined for from two to six weeks. At the same time it often

happens that other hospitals for children are also quarantined, and it may be impossible for a child dangerously ill with some acute disease to be admitted to a hospital. Dr. Graham's idea is to reduce the number of patients in the ward as rapidly as possible, transferring them to a small ward. If the parents wish to take a child home, ought we not to allow them to do so, provided the child is over four and can secure good medical attention and nursing at home? The names of such children should be given to the Board of Health. If a child is convalescent and has had measles previously ought we not to send that child home without consulting the parents? It will not carry the disease and it is well enough to leave the hospital. If the child is an only child, it should be sent home, whether it has had measles or not, if over three years and with good home conditions. Other children in the ward should be kept in strict quarantine in a small ward for fourteen days after the eruption has appeared in the measles case. The large ward should be scrubbed, fumigated, and immediately put into use. If a child over four years, who has already had measles, should apply for admission acutely ill it should be admitted, the parents being informed that it will be exposed to measles. It would be best to have all beds in the ward separated by glass partitions; then when measles occurs remove the measles patient and the child on either side of it; scrub the ward over a space of 20 ft. around the case, and continue admitting children to the ward. In a children's ward all beds ought to be separated by glass partitions; every child should be examined daily for Koplik's spots, coryza, rash, and fever, and suspicious cases should be immediately isolated. Resident physicians should learn to recognise measles before the rash is fully developed. In taking the history, previous illnesses and possible recent exposure to any contagious disease should be noted. Each patient should have his own thermometer, bed-pan, wash-basin, etc.

Hospital Treatment of Measles.—Dr. MATTHIAS NICOLL, jun., of New York, said that the attitude of the public toward measles depends on the environment and occupation of the persons affected by the presence of the disease. In a private house it is commonly regarded as little more than a hindrance to social activity; in the private school, hotel or apartment house, a nuisance; in the tenement, a grave misfortune; and in institutions and hospitals, a calamity. The death-rate from measles is difficult to determine, as it is unquestionably true that many cases are not reported. In 1911, in New York City, 25,540 cases were reported, with 785 deaths; only 2078 of these were treated in the hospitals of the department of health, with 161 deaths; giving a death-rate of 3 per cent. for outside cases and 8 per cent. for hospital cases. During the past year, among 29,163 cases reported, the respective death-rate was somewhat lower, the proportion between hospital and outside cases being about the same. The Riverside Hospital is situated on an island in the East River, patients being transported in a special hospital boat taking three-quarters of an hour for the trip. Only "straight" measles or measles with diphtheria are treated. There are several good-sized one-story pavilions, containing several wards of six to eight beds, which can be fairly well shut off from one another in cases of mixed infection, which, if they arise, are promptly removed to their appropriate pavilion. Great care is taken to keep these wards cool and well aired. During 1913, 1150 measles patients were admitted, 948 of whom had "straight" measles, while the others were complicated by some other infectious disease, mainly diphtheria; 63.3 per cent. of patients

were five years old or less. Nearly 40 per cent. were sent from hospitals or institutions. Thirty-nine cases of scarlet fever and twelve cases of diphtheria developed in the wards, and seven cases of both: 196 cases had bronchopneumonia on admission, and forty-two developed it later. Twenty-seven cases were intubated for laryngeal diphtheria. The percentages of fatal cases were as follows, excluding fifteen cases who died within forty-eight hours: "straight" measles, 6.96 per cent.; all cases, 9.3 per cent. compared with 30 per cent. in 1908, 13 per cent. in 1911, and 9.25 per cent. in 1912. The great mortality in previous years was largely due to treating cases in a single building containing a few large wards, badly over-crowded, with inefficient isolating facilities, for cases of mixed infection. Through careful bacteriologic work and the isolation of infected cases, together with strictest precautions against spreading the disease, only fifteen cases of vaginitis occurred, compared with ninety cases a few years ago. Dr. Nicoll described the new measles building, not yet occupied, constructed so as to give a maximum of light and air, with ample provision for the immediate shutting off of wards in which mixed infections occur and facilities for treating them in absolutely separate rooms. A case of measles in such a hospital should have as good a chance of recovery as if left in the home, which is at present not the case. A measles hospital is an absolute necessity in a large city, unless all general hospitals provide for treating measles when it arises, and certain hospitals provide for measles cases which cannot be properly cared for at home or are a menace to those about them. Until the city provides a measles hospital, the Health Department is justified in its present attitude; removing from homes and institutions only such cases as must be moved, for their own benefit or for the safety of those about them. It would seem that the health authorities would be more likely to act on Dr. Graham's suggestions, if the changes in regard to separating patients from one another in the wards were first carried out.

Dr. H. H. DOAN said that measles may be taken as the type of a contagious disease, being most readily communicable, exceeding even smallpox in this regard. As a cause of death it ranks high among the acute fevers of childhood. The period of incubation, nine to eleven days, is almost constant, the rash appearing on the thirteenth or fourteenth day after infection, almost uniformly. It is considered a disease of childhood only on account of the chances of exposure in early life. When introduced into the Faroe Islands in 1846, 6000 of a population of 7700 were stricken; in 1775, in the Sandwich Islands, 40,000 of a population of 150,000 died. It is common in army camps among troops from the country, exposed for the first time. It is usually transmitted directly; it is extremely doubtful if measles is at all contagious after the temperature has fallen. As it is highly communicable and is infective from the pre-eruptive stage, its suppression is most difficult. Isolation is quite worth while. Physicians should always wear gowns on entering the sick-room, as it is possible to convey measles by a third person. When a case is reported to the Bureau of Health, a medical inspector visits the premises, secures a history, placards the house, and excludes all inmates in any way associated with institutions of learning from school. For those remaining at home, this period of exclusion is three weeks. Should a school-child take up residence in a house where there are no children, he may return to school in two weeks. Should no other cases occur on the original premises, the placard is removed in two weeks and seven days later children are returned to school, after having been seen by a medical inspector. Fumigation is not required. Should a case of measles develop in a hospital

ward, it is removed to the Philadelphia Hospital or kept at the hospital in which it occurred, as other cases will most surely develop, and it is not a good plan to disseminate the disease by discharging exposed children, possibly establishing a number of foci. The ward is then kept under quarantine for two weeks.

Société de Pédiatrie, Paris.

January the 13th, 1914. (Bulletin No. 1.)

Anti-typhoid Vaccine in Children.—MM. GUINON and MALARTE showed the temperature charts of eleven cases of typhoid fever, including both benign and ataxo-adyynamic forms. Treatment was commenced from the seventh to thirteenth day in doses from $\frac{1}{4}$ to $1\frac{1}{2}$ c.c. given in the deltoid region. Local reaction was little marked. There was no immediate general reaction and the temperature did not seem influenced the same day. There were some remissions the day following, but too irregular and inconstant to allow of any conclusion. It was difficult, therefore, to judge the effect of the treatment on the duration of the disease, but it seemed to have cut short those of medium gravity and to be followed by a more satisfactory convalescence; it improved the intestinal condition, but did not prevent hæmorrhages, abscesses, nor relapses.

Difficulties in Diagnosing Appendicitis in Young Children.—M. VICTOR VEAU reported six cases with the following conclusions: Young children have no localised appendicular pain, some cry and are fretful, others try to remove clothing from the abdomen. Older children complain of their abdomen and point to the umbilical region. Definite localisation in the right iliac fossa is exceptional. Tenderness in the right iliac fossa is absent; the same may be said of resistance of the parietes. This is the reason that appendicitis is only recognised in grave cases with perforation and that simple cases are overlooked or considered rare in young children.

Paratyphoid Fever in an Infant aged 8 Months.—M. LAGANE related the case of a child nursed by her mother who was suffering from an attack of fever. Agglutination tests gave identical results in both mother and child. The source of the mother's attack was unknown, but the child had been probably infected through the milk. The incubation period was fifteen days in the child, the onset sudden; the fever lasted twenty-three days, and terminated by lysis.

Injections of Salvarsan by the Jugular and Epicranial Veins in Infants and Young Children.—M. BLECHMANN gave details of his technique and results, and showed an instrument which was a kind of modification of Bier's apparatus for obtaining blood from young children for Wassermann's reaction.

Congenital Dilatation of Colon and Absence of Thyroid in an Infant aged 7½ Months.—M. DUMAS.—The existence of obstinate constipation since birth, the size of the abdomen and radioscopy suggested Hirschsprung's disease. The clinical course, however, the beneficial effect of hormonal and thyroid extract, and the aspect of the child, pointed to thyroid aplasia with deficient peristalsis.

VINCENT DICKINSON.

Abstracts from Current Literature.

Medicine.

Three types of occlusion of the œsophagus in early life (*Am. Journ. Dis. Child.*, 1913, vi, p. 1).—**T. M. Rotch**.—(1) Boy, aged 25 months. X rays showed a narrowing of the lower third of the œsophagus. (2) Girl, aged 10 years, with spasm of the cardiac end of the œsophagus. (3) Boy, aged 5½ years, with a stricture 24 cm. from the incisor teeth. Rotch considers there are two classes of œsophageal narrowing not due to trauma. In the first the stricture is due to an organic condition, while the other is functional, with perhaps the addition of a congenital condition of a brain centre represented by a lack of inhibition. F. R. B. ATKINSON.

The position of the stomach in children in relation to posture (*New York Med. Journ.*, 1913, xcvi, p. 549).—**Sever**, from examination of eighty-three cases, states that the average position of the stomach is a much lower one than has been previously suspected, and that to find a stomach at or well below the crests of the ilium is not at all unusual. We must also change our ideas as to the shape of the child's stomach; it is generally large, and either horizontal or of the "sink drain" type. The ideal so-called "cow's horn" type is rare. To find a child's stomach low does not therefore mean a pathological ptosis. J. PORTER PARKINSON.

Gastric motility in infants (*Arch. of Ped.*, 1913, xxx, p. 740).—**Maynard Ladd** has studied over 200 skiagrams of infants' stomachs, using a feed of two rounded teaspoonfuls of subcarbonate of bismuth. He does not think that the bismuth causes the motility of the stomach to be diminished, since no difference in the emptying-time of the stomach could be observed on doubling the dose of the bismuth. Several interesting results were noted. Peristalsis of the usual type appeared uncommon in the infants' stomachs; they emptied themselves rather by a general contraction of the organ, squeezing out the contents. Normally some food seems to pass into the intestine as soon as it is taken into the stomach, and the major part of the feed leaves the stomach within 1½ to 2½ hours in breast-fed and bottle-fed babies. The remainder may fail to pass from the stomach until five or even seven hours have elapsed from the feeding-time. Feeding again at the end of three hours appears to accelerate the passing of the first meal, but a second feed soon after the first delays the emptying of the stomach. A high percentage of casein prolongs the emptying-time of the stomach, while the presence of fat and possibly of barley-starch probably diminishes it. REGINALD MILLER.

Further study of the anatomy and physiology of the infant stomach based on serial Röntgenograms (*Am. Journ. Dis. Child.*, 1913, vi, p. 232).—**G. R. Pisek** and **L. T. LeWald**, as a result of their investigations, conclude that there is no definite type of stomach which is normal in an infant. They were able to distinguish (1) the ovoid shape, (2) the tobacco-pouch or retort shape, especially common in weaklings, and (3) the pear shape, with base upwards and to the left. The shape of the stomach does not depend directly upon the amount or character of the food ingested, but rather upon the quantity of air in the organ. In the majority

of cases the pylorus is behind the pyloric third of the body of the stomach. The authors were well able to study the passage of food through the stomach, and found that in a number of cases bismuth passed into the duodenum within a minute after the stomach had been filled by gavage, the average time being five minutes. Except on a semi-solid diet the viscus tended to empty itself with remarkable rapidity, a large number being empty within an hour. The authors on these results question the propriety of long-interval feeding after the German fashion. The retarding influence of alkalies and the lack of intermixture of the gastric contents were also confirmed in these infants.

REGINALD MILLER.

Radiographic studies of the gastro-intestinal tract in infants (*Journ. Amer. Med. Assoc.*, 1913, LXI, p. 1419).—**H. D. Chapin.**

Use of the Roentgen ray in the diagnosis of obscure abdominal conditions in infancy and childhood (*Journ. Amer. Med. Assoc.*, 1913, LXI, p. 1422).—**J. L. Morse.**—These papers, which are illustrated by skiagrams, deal with the variations in the alimentary tract in health and disease, but neither of them lends itself to abstraction. Readers are referred to the original monographs.

T. R. WHIPHAM.

Stomach-aches associated with general infections in children (*Practitioner*, 1914, XCII, p. 26).—**H. Tyrrell-Gray** finds that interference with the normal processes of peristalsis gives rise to pain and may occur in (a) the lumen of the intestine: In measles acute inflammations of the lining membranes of the body are very common, and in the intestine give rise to diarrhoea with or without pain, with absence of undigested food in the mucous stools. (b) The intestinal wall: (1) Acute rheumatism: Severe colicky pain occurs sometimes, and if the infection is very severe, hæmorrhage giving rise to Henoch's purpura. (2) Diphtheria: Acute abdominal pain with passage of blood and mucus may occur. (3) Serum toxæmia. (4) Acute follicular tonsillitis. (5) Intussusception and appendicitis: Acute infections may be factors in the ætiology of the former when the dietetic factor can be excluded, and it is well known that acute infections can produce appendicitis. (c) The mesentery: Chronic continued infection from some septic focus may affect intestinal functions, and cause chronic irritation of the bowel and enlargement of the mesenteric glands, which frequently kink the appendix and induce repeated stomach-aches, until finally the lumen is blocked and acute appendicitis results. The author believes that many of the intestinal and dyspeptic troubles of later life owe their origin to repeated acute or chronic general infections in childhood.

F. R. B. ATKINSON.

Recurrent vomiting (*Arch. of Ped.*, 1913, xxx, p. 445).—**A. Clifford Mercer** gives a clear account of our present knowledge of this condition. He regards "recurrent vomiting" as a better term than "cyclical vomiting," because, as other writers have also pointed out, the attacks do not occur at sufficiently regular intervals to warrant the use of the latter adjective. In the same group he includes also lithæmic and bilious or nervous vomiting and migrainous gastric neurosis. The first case, according to this writer, was described by Cruère in a publication of the Dijon Medical Society in 1841, which thus anticipated Gee's paper by forty-one years. Like most recent writers on the subject he thinks that acidosis is an incidental rather than a fundamental cause of recurrent vomiting, and he also poin

out the similarity between it and post-anæsthetic poisoning. He agrees that all treatment in a well-developed attack has failed to stop the vomiting. The alkaline treatment has been remarkably successful in some hands and a failure in others. It seems to be more likely to be successful when started in the prodromal period. If the prodromata are promptly recognised and the diet immediately curtailed or food is temporarily omitted, the intestinal tract cleared and bicarbonate of soda given freely, an approaching attack can be prevented. The treatment is not simply alkaline. It is also one of dietetic rest, liver rest, and toxic elimination, catharsis in treatment replacing emesis in the disease. He describes a case of migraine and another of recurrent vomiting in support of his contention.

FREDERICK LANGMEAD.

Ulcer of the stomach and duodenum in children (*Gaz. des Hôp.*, 1914, LXXXVI, p. 213).—**A. Mathieu**.—In the infant one may find multiple punctiform ulcerations or sometimes less numerous or single round ulcers. They may appear in the first few days of life, or later on be accompanied by malnutrition and rickets. They may cause death without other symptoms than melæna. Mathieu quotes the case of a child, aged 10 months, with a duodenal ulcer which caused pyloric spasm and vomiting but neither hæmatemesis nor melæna. Death resulted after three months' illness. In later childhood Brinton has given statistics of only two cases under ten years and eighteen between ten and twenty years. Moutier states that out of 380 females the ulcer started in 84 probably between the ages of 11 and 20, and holds that ulcer starts most probably about the time of puberty. The clinical history of a case of ulcer of adolescence is given as follows: Gastro-intestinal troubles when weaned, at four years old epigastric pain, vomiting and exaggerated hunger, persistence of these symptoms till at the age of 11½ years hæmatemesis and melæna appeared and typical symptoms of ulcer.

J. PORTER PARKINSON.

Duodenal ulcers in infancy (*Am. Journ. Dis. Child.*, 1913, VI, p. 381).—**L. Emmett Holt** records four cases. (1) Female child, aged 3 months, admitted to hospital for loss of weight, vomiting and constipation. The vomiting had been present since the age of two weeks and suggested pyloric stenosis. Temperature subnormal. No marked abdominal distension, nor tenderness. Sudden death took place. Post mortem general peritonitis was found, which was due to the perforation of a duodenal ulcer on the posterior wall just below the pylorus. (2) Male child, aged 2 months, admitted for marked jaundice and progressive loss of weight. Blood was present in the stools. Death was due to marasmus. Post mortem two small ulcers were found in the duodenum, one just below the pylorus, and the other 1 cm. lower down. (3) Female child, aged 4 months, admitted for diarrhœa and vomiting. Sudden death took place due to concealed hæmorrhage. Post mortem the stomach was found to contain a large quantity of fluid blood, but no ulcers, and a large red clot extending into the duodenum. A single ulcer was found in the duodenum extending to the peritoneal coat. (4) Male child, aged 12 days, admitted for diarrhœa and vomiting since birth. Death forty-eight hours after admission. Multiple erosions were found in the gastric mucosa, and a single ulcer in the duodenum 1 cm. below the pylorus. Holt gives a summary of the literature of duodenal ulcers in the first year of life, of which there are now 95 on record.

J. D. ROLLESTON.

Clinical and anatomical observations in a child with congenital stenosis of the bowel (*Monatsschr. f. Kinderheilk.*, 1913, xii, p. 341).—**K. Stolte** describes the autopsy on a child, aged 9 days, in whom marked stenosis of the duodenum was found. F. R. B. ATKINSON.

Pancreatic insufficiency (*Am. Journ. Dis. Child.*, 1913, vi, p. 65).—**Langley Porter** regards as of this type cases called "coeliac disease," "Herter's intestinal infantilism," and "Bramwell's pancreatic infantilism." The primary lesion he attributes to an infective duodenitis, with a secondary invasion of the pancreatic ducts and the production of pancreatic insufficiency. The infection of the duodenum occurs in the presence of unusual bacterial forms in the upper intestine. It is not suggested that one organism is specific for this condition; more probably any pathogenic bacterium, even the colon bacillus, under abnormal intestinal conditions may lead to a pancreatitis. In one case great improvement occurred under treatment by a vaccine made of a Gram-positive bacillus. REGINALD MILLER.

Ætiology and significance of pericolic membranes (*Journ. Amer. Med. Assoc.*, 1913, lxi, p. 248).—**D. Cheever**, in dealing with the question of the membranous structures which are frequently found enveloping the cæcum and the ascending and transverse colon, considers that they may be divided ætiologically into (1) congenital and (2) those due to peritoneal irritation. As regards the former he has found a well-marked pericolic veil in a child aged 12 years, and in an examination of thirty stillborn infants at Harvard there were four instances of a membrane extending from the parietes over the hepatic flexure and ascending colon (and in one instance over the cæcum) and fusing with the peritoneum of the colon near its mesenteric border. In three of these instances there were other developmental aberrations present, such as lack of normal fixation of the cæcum, a continuance of the gastro-hepatic omentum to the right between the duodenum and gall-bladder, a Meckel's diverticulum, and an undescended testicle. It would seem that the method of origin of these membranes must be involved in the rotation and descent of the cæcum from its first point of fixation beneath the liver, the most likely process being the twisting of the cæcum and proximal colon on its long axis during descent. The author is of the impression that congenital membranes in the majority of cases cause no symptoms whatever. In the event of constrictions occurring they should be divided, preferably with the cautery protected by a spatula introduced beneath the membrane. The other types of membrane caused by visceral or peritoneal irritation are more likely to cause symptoms and to require operative relief. T. R. WHIPHAM.

Membranous colitis in children (*Arch. f. Kinderheilk.*, 1913, lxii, p. 47).—**E. Steinscheider** records 3 cases, 2 in boys, aged 2 and 6 years, and 1 in a girl, aged 1 year and 7 months. As in the mucous colitis of adults passage of membrane in the stools is the characteristic feature of the disease, but in children there is a complete absence of pain. In all 3 cases there had been a recent attack of enteritis. Two of the children suffered from lichen urticatus and eczema. J. D. ROLLESTON.

Amœbic dysentery in infants (*Journ. de M'éd. de Paris*, 1913, xxxiii, p. 701).—**Lesage** and **Robillier** quote four cases of amœbic dysentery in infants under two years old. The cause may be dried fruits, but some cases

are due to direct infection. The incubation is one or two days. The symptoms resemble those in the adult; these are severe abdominal and rectal pains and tenesmus. The stools are frequent, small and bloodstained; there may be thirty or forty in twenty-four hours. There is an acute form with sudden onset, which may subside under treatment or become chronic. There is a sub-acute form with only slight fever and semi-solid fœtid stools. There are no general symptoms in the chronic form, in which the dysenteric stools follow a slight diarrhœa. This form does not yield easily to treatment and is very apt to recur. The tongue is moist and red or slightly furred. The abdomen is a little tense or retracted and tender, especially in the left iliac fossa. Digestion is incomplete, and the residue tends to irritate the dysenteric ulcerations. The liver is increased in size, but secretion of bile is lessened. The urine is slightly diminished. Nervous troubles are rare. There is a marked eosinophilia, and in chronic cases anæmia. There may be transient œdema of face and extremities. Prolapsus recti may appear. Abscess of the liver is a rare complication in the infant. The diagnosis can only be made certain by microscopic examination of the stools. The acute form resembles bacillary dysentery but in this there are more severe general symptoms, more evidence of intoxication, higher fever, more frequent stools, vomiting and tendency to syncope. The stools are viscid, opaque or transparent, green, white or yellow. Fæcal matter and blood are mixed together in variable quantity. The reaction is always alkaline and it is a good prognostic sign when it becomes acid. Microscopically there are epithelial cells, red and white corpuscles, crystals like Charcot-Leyden crystals in addition to those normally present, phosphates, oxalates, mucus, and many amœbæ. The specific amœba is generally the *Amœba tetragena* of Viereck. Emetin is the best treatment, 0.01 gm. twice daily to a child of two years old.

J. PORTER PARKINSON.

Y-bacillus dysentery in infants and young children (*Arch. f. Kinderheilk.*, 1913, *Baginsky Festschrift*, p. 35).—**J. Bauer, Ellenbeck and Fromme** describe an epidemic of 29 cases which occurred during October, 1912, in a Dusseldorf home for women and children. Two obstinate cases of dysentery had already occurred there in July and August. Two thirds of the staff, though perfectly well, yielded a serum which agglutinated the Y-bacillus. Eleven exclusively breast-fed infants entirely escaped, while of ten on mixed breast and artificial feeding six showed more or less evidence of dysentery. Dysenteric stools occurred in eleven cases. Four infants showed a tendency to dyspepsia. Three had formed stools with only traces of mucus. In many there was no fever. The disease lasted from a few days to one or two weeks. No complications occurred and all recovered. In only seven out of seventeen cases of clinical dysentery was the Y-bacillus found in the stools. Seven of the twenty-nine cases gave a negative serum reaction.

J. D. ROLLESTON.

Y-bacillus dysentery in infants (*Arch. f. Kinderheilk.*, 1913, *Baginsky Festschrift*, p. 689).—**E. Siegel**.—During the summer and autumn of 1912, sixty infants in Baginsky's hospital suffering from gastro-intestinal disturbance had their stools examined for bacilli of the coli and dysentery group; 8 out of 9 cases with symptoms of dysentery showed dysentery bacilli of the Y type and no other dysentery bacilli; in the remaining case Gaertner's *B. enteritidis* was found. The symptoms and pathological anatomy of the Y cases were those of follicular enteritis. Four died. The remaining 51 cases

had no symptoms of dysentery but various gastric disturbances or diarrhoea. None of these showed any Y-bacilli, but paratyphoid B bacilli and *B. coli*.
J. D. ROLLESTON.

The chemical reaction of the infant's fæces ('*Gazz. Med. Ital.*,' 1913, LXIV, p. 261).—P. Binda finds that in infants at the breast the reaction is normally acid; the acidity estimated in c.c. of solution of soda per 100 gm. of fæces is on an average 18–19 c.c. Marked variations occur even under normal conditions, but probably a maximum of 28–30 c.c. and a minimum of 10 c.c. express the extremes. In bottle-fed infants the acidity is markedly less, being on an average 5 c.c. of solution of soda per 100 gm. of fæces. As a general rule an acidity above 10–15 c.c. of soda solution or distinct alkalinity point to some anomaly of digestion.

VINCENT DICKINSON.

The frequency, diagnosis and latest treatment of threadworms in children ('*Arch. f. Kinderheilk.*,' 1913, LXII, p. 49).—A. Lechler, as a result of his observations, sums up as follows: (1) Amongst 300 cases of children examined 16·33 per cent. were affected with the ascaris. (2) The diagnosis can only be made with certainty when the worms or eggs are found in the stools. (3) Telemann's method possesses no advantages over the simple method of microscopic examination of the stools. (4) Oleum chenopodii anthelminthici and the emulsion called "wormolin" are to be recommended.

F. R. B. ATKINSON.

On Ascaris lumbricoides, Oxyuris vermicularis, and Trichocephalus dispar in children ('*Wien. klin. Rundschau*,' 1913, xxvii, pp. 387, 402, 419, 436, 451, 467, 483).—Neumann gives a very extensive but somewhat discursive review of this question. She gives the following statistics for Berne and neighbourhood as to the frequency of infection at different ages:

Age in years	1-3	4-6	7-9	10-12	13-16
<i>Ascaris</i>	19·23 per cent.	26·6 per cent.	58·81 per cent.	33·3 per cent.	30 per cent.
<i>Trichocephalus</i>	11·53 per cent.	13·33 per cent.	35·29 per cent.	11·11 per cent.	20 per cent.

These figures were obtained by an examination of the fæces of 122 children in the hospital. *Oxyuris* may cause such irritation as to lead to sleeplessness, various nervous symptoms, and convulsions. Cases of appendicitis caused by the parasite are cited. They are often not easy to dislodge. When possible santonin should be given in glutoid capsules in order to deal with the worms in the upper part of the intestine. *Ascaris* is the most wide-spread of worms; the literature is quoted to show the many serious symptoms to which they must sometimes give rise. The *Ascaris* has been found in the stomach, liver, pancreas, and biliary canals. There is good evidence of appendicitis and perforation caused by the parasite, but it cannot be definitely stated that suppurative conditions in the intestines have been primarily due to the *Ascaris*. There are good grounds for admitting the toxic effect of *Ascaris* (Chauffard's ascariasis typhoid). *Trichocephalus* is usually a harmless parasite, but a case is described where a very severe anæmia was associated with masses of these worms in the rectum. The

hæmoglobin was 50 per cent., and the red blood-corpuscles 3,200,000; eosinophiles 4 per cent. Treatment is difficult; children can be given thymol 0.3 gr. two to three times a day for several days. In all cases of "worms" the fæces should be examined for eggs before giving the child a clean bill of health.

M. D. EDER.

Perforation of the bowel by ascarides ('*Arch. f. Kinderheilk.*,' 1913, LXII, p. 11).—H. Plew goes exhaustively into the literature of this subject, and describes a case of his own in a boy, aged 3 years, who died at the second week of typhoid fever from symptoms of perforative peritonitis. The autopsy showed amongst other appearances a perforation below the duodeno-jejunal flexure due to *Ascaris lumbricoides*.

F. R. B. ATKINSON.

Incontinence of urine due to thread-worms ('*Journ. de Méd. de Paris*,' 1913, XXXIII, p. 520).—A. Jacquemin.—This is most common in boys under the age of twelve years. It is a neurosis often accompanied by great excitability, nocturnal terrors, epilepsy, chorea, etc. The causes may be phimosis, abuse of drinks, emotion, cold, etc., but most frequently thread-worms. These are often the original cause, but with their disappearance the incontinence does not always cease; the patient has to be treated for the neurosis which keeps up the habit. Severe measures are only harmful; the child must be encouraged and his confidence restored. Each evening 5-15 gr. of antipyrin may be given with 2-10 drops of laudanum. Sometimes epidural injections of physiological serum are useful, or its rectal injection may be substituted.

J. PORTER PARKINSON.

Helminthiasis and tubercular meningitis ('*Berl. klin. Woch.*,' 1913, L, p. 1987).—J. Przedborski.—A boy, aged 2½ years, was brought to hospital with a history of having vomited a round-worm. No worms had been seen in the stools. He had always been delicate, and had been under treatment for phlyctenular conjunctivitis and a tuberculous skin eruption. Fifteen drops of oleum chenopodii were given and 125 worms (*Ascaris lumbricoides*) were passed in the next two days, ranging in size from 190 mm. long and 3 mm. broad to 35 mm. long and 1 mm. broad. Within a few days well-marked symptoms of tuberculous meningitis developed and death took place within a week. The autopsy showed tuberculous meningitis, caseous tracheo-bronchial glands, and acute general miliary tuberculosis. The intestine was free from worms and any inflammation.

J. D. ROLLESTON.

Surgery.

Congenital fistula of the upper lip ('*Journ. de Méd. de Bordeaux*,' 1913, XLIII, p. 585).—Parcelier records a case in a girl, aged 17 years, who had had a fistula of the upper lip from birth. It was situated 1 cm. to the left of the midline, 3 mm. from the border of the mucous membrane, and had been discharging a large quantity of muco-pus, especially for the last year. On palpation the fistula could be traced up to the corresponding nostril. Injections of iodine proved ineffective, but definite cure followed extirpation, which was carried out from the inner side of the lip.

J. D. ROLLESTON.

Operation for hare-lip in the out-patient department (*Edin. Med. Journ.*, 1913, xi, p. 419).—**James H. Nicoll** points out that it is in the unilateral cases that the effects of scar contraction are most troublesome. In the avoiding of flat nostril, notched-lip and asymmetrical mouth in unilateral hare-lip, experience has led him to adopt five lines of procedure which are more or less opposed to much of the current teaching on the subject. They may be briefly stated as follows: (1) Over-tilting of the intermaxillary in alveolar cases; (2) a moderate degree of tension; (3) insertion of tin-foil between the soft parts and the periosteum; (4) median position of probalial juncture; (5) nostril moulding.

J. ALLAN.

Congenital occlusions of the œsophagus and lesser bowel (*Glas. Med. Journ.*, 1913, LXXX, p. 16 *et seq.*, and p. 90 *et seq.*).—**G. H. Edington** carried out a most exhaustive investigation and arrived at the following conclusions. **A. Œsophagus.** (1) It is highly probably that imperforate pharynx is due to abnormal relationship of the tracheo-œsophageal ridges to the posterior (dorsal) wall of the fore-gut. (2) The abnormal relationship consists probably in the ridges being placed obliquely. (3) Should a partition exist below the tracheo-œsophageal fistula there is reason to believe that the ridges have been formed in two parts, of which the upper have been obliquely placed. (4) The lower ends of the obliquely placed ridges having come in contact with the posterior wall of the fore-gut, a permanent union results, shutting off the upper from the lower segment of the œsophagus. (5) Meconium may be found in the bowel. **B. Duodenum.** (6) There is frequently a close relationship between a duodenal occlusion and the point of entry of the bile and pancreatic ducts. (7) Occlusion without relationship to the ducts may occur. (8) While the former class may be related to the development of the biliary and pancreatic apparatus, both classes may result from the epithelial occlusion which normally occurs in the course of development of the duodenum. (9) A duodenal septum, although causing an actual obstruction, may be the seat of a microscopic channel connecting the lumen above with that below the septum. (10) Such a channel has been erroneously looked upon as an abnormality of the ducts. (11) Abnormal disposition of the pancreas may accompany duodenal septum. **C. Ileum.** (12) Occlusion of the ileum is usually caused by structural malformation (septum, etc.). (13) The malformation has a wide range of situation, from high up in the ileum to its lower end. (14) There may be no structural malformation, in which case obstruction is produced by a plug of mucus. (15) As regards aetiology, in two of his cases peritonitis was the causal factor, in two the cause was embryological, probably related to obliteration of the vitelline duct; in the remaining two no cause could be suggested for the mucous obstruction. (16) In three cases there was deficiency of circular muscularis, marked when compared with the longitudinal layer. (17) This deficiency is in keeping with the view that the occlusion of the bowel was produced by pressure acting from without inwards. (18) The gut distal to the obstruction is not merely empty, but unexpanded. Its structure is normal, but in miniature. Several cases are given, and the paper, which is an important contribution to current medical literature, is illustrated by numerous plates and figures.

J. ALLAN.

Diverticulum above a cicatricial stenosis of the œsophagus (*Jahrb. f. Kinderheilk.*, 1913, LXXVIII, p. 83).—**H. Flesch** describes this condition in a girl, aged 5 years, due to swallowing caustic potash. Death occurred four years afterwards.

F. R. B. ATKINSON.

Case of child in whose œsophagus a halfpenny had remained for eight years (*Edin. Med. Journ.*,² 1913, xi, p. 519).—**W. G. Porter**.—

The boy, when aged 4 years, had swallowed a halfpenny, which had never been seen since. He came under observation for vague gastric symptoms. His development and general health were poor. An X-ray photograph located the foreign body in the œsophagus between the sixth and seventh dorsal vertebræ. When its removal was attempted the halfpenny slipped into the stomach, and though the boy said he had passed it one day, it was not found in the stools. His general condition very markedly improved and he put on weight. The chief points of interest are: (1) The length of time the coin had remained impacted without causing any obvious injury to the œsophagus; (2) the indefiniteness of the symptoms, more especially the absence of dysphagia; and (3) the extraordinary and rapid improvement after the coin had been dislodged, showing that it really was the cause of the illness.

J. ALLAN.

Enterogenous mesenteric cysts (*Johns Hopkins Hosp. Bull.*,¹ 1913, xxiv, p. 316).—**R. H. Miller** records a case of an enterogenous mesenteric cyst which produced intestinal obstruction in a female infant, aged 4 days, and discusses fully the nature of this special form of mesenteric cyst, of which he has collected twenty-eight since 1900. Mesenteric cysts of intestinal origin may be derived in two ways: (a) by sequestration from the intestine during embryonic development; this was proved to occur in 1908 by Lewis and Thyng. These cysts may occur in the upper part of the small intestine and may be multiple or multilocular. A remarkable example of a retroperitoneal cyst containing eight pints of fluid and resembling an hour-glass stomach is quoted from Ahrens; the fluid was weakly acid and digested egg-albumin on the addition of HCl, and the lining membrane showed multiple ulcers. (b) The remains of the vitelline or omphalo-mesenteric duct or Meckel's diverticulum, when it arises from the concave side of the intestine or acquires an intra-mesenteric position, may give rise to juxta-intestinal cysts near the lower end of the ileum. Enterogenous mesenteric cysts may be exact reproductions of the intestine, or the epithelial lining may vary; it may be stratified, cuboidal or ciliated. Apparently a cyst of the mesentery has never been correctly diagnosed. About half the cases have acute intestinal obstruction and prove fatal unless treated surgically. Complete obstruction is usually due to volvulus. There is a striking resemblance to intussusception in the symptoms and in the special incidence of the two affections in the first decade of life. In the other group of cases, the latent cases, the signs and symptoms are not uniform; pain is common, but not characteristic, and many, perhaps most of the cases, give a history of mild intercurrent attacks of partial intestinal obstruction.

H. D. ROLLESTON.

Mucous cyst of the cæcum in an infant ten weeks old, producing obstruction of the ileo-cæcal valve and symptoms simulating an intussusception (*Am. Journ. Dis. Child.*,¹ 1913, vi, p. 99).—**A. D. Blackader**.—At an operation for removal of the symptoms excision of a retention cyst of the appendix was performed. The author could only find three cases in the literature of retention cysts in the neighbourhood of the ileo-cæcal valve leading to obstruction and invagination.

F. R. B. ATKINSON.

The diagnosis of intussusception by X ray (*Am. Journ. Dis. Child.*, 1913, VI, p. 93).—**I. M. Snow** and **M. Clinton** report the case of an infant nearly 3 months old, whose case was diagnosed by the X rays with the colon filled with bismuth emulsion. The skiagram showed an unreduced intussusception in the right quadrant of the abdomen. Operation was performed and the child recovered.
F. R. B. ATKINSON.

Strangulated hernia of cæcum and appendix in an infant (*Journ. de Méd. de Bordeaux*, 1913, LXXXIV, p. 533).—**Codet-Boisse** successfully operated on a child, aged 11 months, with a congenital right inguinal hernia which had been strangulated for four days, and had resisted all attempts at reduction. Kelotomy followed by radical cure was performed. The appendix was healthy.
J. D. ROLLESTON.

Acute appendicitis in infancy and childhood (*Med. Record*, 1914, LXXXV, p. 9).—**W. G. Vincent**.—The disease is rare under 2, rather uncommon under 5, but frequent between 5 and 15 years. Murphy found that the symptoms occurred in the following order: pain in the abdomen, nausea and vomiting, general abdominal sensitiveness, and rise of temperature; with extremely rare exceptions the treatment is always surgical.
F. R. B. ATKINSON.

Appendicitis in childhood (*Birmingham Med. Rev.*, 1914, XXV, p. 26).—**S. Barling** finds that 21 per cent. of his 132 acute cases in children under twelve died, compared with 12·7 per cent. in adults during the same two years. In 40 per cent. of his cases a concretion was found. He believes that the greater mortality in children is due partly to this concretion and also to the difficulty in diagnosis. In operating as little should be done as possible, and no prolonged search made for the appendix. Open ether is the best anæsthetic.
F. R. B. ATKINSON.

Appendicitis in measles (*Thèses de Paris*, 1913-14, No. 109).—**G. Le Lyonnais**.—The thesis contains the histories of 18 cases, including 5 hitherto not published in children aged from 3 to 8 years. The principal conclusions are as follows: (1) The pathogeny is thus explained: (i) The appendix is a lymphoid organ which reacts to infections like the tonsil. (ii) The virulence of the normal micro-organisms of the appendix is exalted in the course of the new infection. (iii) Micro-organisms foreign to the appendix are sometimes conveyed to it by the blood and lymph. (iv) The intestinal enanthem may serve as a portal of entry for the infection. (2) The chief symptoms are vomiting and localised pain; (3) The prognosis is not aggravated by the co-existence of the two diseases (*cf. BRITISH JOURNAL OF CHILDREN'S DISEASES*, 1910, VII, p. 181).
J. D. ROLLESTON.

Appendicitis with an unusual complication (*Austral. Med. Journ.*, 1913, II, p. 1199).—**F. T. Beamish** found on laparotomy on a girl, aged 14 years, an inflamed and perforated appendix and œdematous black coils of the ileum; the appendix was removed and the affected coils of the ileum resected. The cæcum was bound down in the pelvis. The patient completely recovered.
F. R. B. ATKINSON.

Rupture of the sigmoid by an air-blast (*Journ. Amer. Med. Assoc.*, 1913, LXI, p. 1898).—**H. Shoemaker** reports the case of a mill-boy on whose anus another lad played an air-hose while he was leaning down. The

blast was of 120 lb. pressure to the square inch. The boy dropped unconscious at once, and was removed to hospital 20 hours later with fever and severe abdominal signs. The abdomen was opened and the peritoneum was found full of blood with a slight odour. The upper portion of the rectum and all of a very redundant sigmoid were split along the free margin of the intestine. Above the sigmoid and in the lower portion of the descending colon two transverse tears crossed the bowel. The effects of the air-blast, by the stretching and checking of the peritoneum as well as by the congestion of the blood-vessels, could be seen as far as the cæcum. The small intestines were collapsed and were not congested. The tear in the intestine was not completely through it. The serous and muscular coats were torn through, but the mucous coat was stretched to the thinness of tissue-paper and filled a 10-inch gap. The mucosa was folded in by interrupted stitches of sea-island cotton placed in the muscular and serous layers of the bowel. A double row of stitches was used throughout. The intestine was opened well above the traumatic area of the bowel in the descending colon. A No. 24 French catheter was passed out of the rectum and fastened in the bowel by one stitch of chromic catgut. The bowel was closed by interrupted stitches of sea-island cotton and a drain was placed in the pelvis. The patient made an uneventful recovery.

T. R. WHIPHAM.

Congenital facial hemiatrophy, with malformation of the ear and hypoplasia of the sterno-mastoid (*Journ. de méd. de Bordeaux*, 1914, lxxxv, p. 10).—**Rocher and Boissérie-Lacroix**.—A boy, aged 5 years, in addition to right facial hemiatrophy showed marked atrophy of the right pinna with its lobule adherent to the parotid region. There was atrophy of the right mastoid process and the right sterno-mastoid was one third the size of the left. There was no torticollis. The right inferior maxilla also showed marked atrophy. There was considerable impairment of hearing in the right ear, only sounds transmitted through the skull being faintly heard, which showed that a rudimentary labyrinth existed.

J. D. ROLLESTON.

Two cases of multiple suppurative periostitis simulating acute rheumatism (*Austral. Med. Journ.*, 1913, II, p. 1281).—**W. E. Tulloh** describes two cases in boys, aged 9 and 14 years respectively, in whom the onset was sudden, there were no previous illness, no rigors, no previous septic trouble, disappearance of pain after incision and improvement of the local condition, swelling of several joints but no suppuration, with tendency of the pain to shift from joint to joint, and no epiphyseal trouble. The first case recovered, but the second died of septicæmia. The ankle and the left and right tibiæ were affected in the boy of nine, and the right thigh, knee, and elbows in the other case.

F. R. B. ATKINSON.

A unique case of congenital scoliosis (*Arch. of Pediat.*, 1913, xxx, p. 276).—**J. Fraser** describes a case of a child, aged $1\frac{1}{2}$ years, showing incomplete seventh and eighth dorsal vertebræ. Upon the right side there were half vertebræ and each half was wedge-shaped. Upon the left side the two vertebræ were fused into a single wedge-shaped bone. The last dorsal vertebra was divided into two halves by a mesial division. The first three lumbar vertebræ were incomplete; the right halves were present; upon the left side they were separate bones. Upon the left side there were thirteen ribs. The ribs of the left side, corresponding to the seventh, eighth, and ninth dorsal

vertebræ, were fused about one inch from the side of the vertebral column into a single broad rib, and this rib articulated with the vertebral column by two short processes.

F. R. B. ATKINSON.

Spondylitis infectiosa (*'Arch. f. Kinderheilk.,'* 1913, LXII, p. 43).—**E. Reye**.—A female infant, aged 6½ weeks, was admitted to hospital moribund. The necropsy showed an acute purulent spondylitis caused by the *Staphylococcus aureus*, which had led to destruction of the sixth dorsal vertebra, gibbus formation, compression of the spinal cord and infection of the right pleura. Infection had probably taken place through the digestive tract, as the mother had continued to nurse the child in spite of purulent mastitis, which had occurred on the fifth day after the child's birth and involved first the one and then the other breast. In an editorial note **Baginsky** alludes to a fatal case of multiple furunculosis in an infant who had been nursed by a mother with purulent mastitis.

J. D. ROLLESTON.

The clinical symptoms of surgical scarlet fever (*'Monatsschr. f. Kinderheilk.,'* 1913, XII, p. 233).—**H. Hans** records seventeen cases in children aged from ten months to eight years. Seven followed resection of rib for empyema, one operation for hernia, and the rest burns and various wounds. The onset was not characteristic. In several cases the temperature was already raised. In only a small number did vomiting occur. In some cases the eruption started from the neighbourhood of the wound, as did also the subsequent desquamation. The characteristic injection of palate, uvula and tonsils was absent. Follicular deposit on the tonsils was never seen. The wounds all healed *per primam* and did not appear to be affected by the attack of scarlet fever. All the cases ran a mild and uncomplicated course, which Hans attributes to infection with an attenuated virus.

J. D. ROLLESTON.

Bilateral empyema thoracis treated by successive rib resection (*'Arch. of Ped.,'* 1913, XXX, p. 684).—**A. Zingher**.—A child, aged 6½ years, with pus in the left chest, had part of the eighth rib resected and drainage-tubes inserted. Three weeks afterwards pus in the right chest necessitated two rib resections on that side. Recovery took place.

F. R. B. ATKINSON.

A case of traumatic spinous meningocele combined with pachymeningitis hæmorrhagica interna (*'Jahrb. f. Kinderheilk.,'* 1913, LXXVI, p. 160).—**R. Schindler** describes a case in a girl, aged 13 months. Lumbar puncture withdrew normal fluid, markedly increased in quantity by pressure of the tumour. Section revealed internal pachymeningitis hæmorrhagica in addition to the meningocele, which the author considers was due to increased intracranial pressure as a result of the pachymeningitis. The child was treated by frequent lumbar punctures, which are of therapeutic efficacy.

F. R. B. ATKINSON.

Wound of the meninges in the lumbo-sacral region (*'Semana Med.,'* 1912, XIX, p. 553).—**Rocco**.—The patient was a boy, aged 11 years, who had received a knife wound in the lumbo-sacral region. The fourth day after the injury clear liquid was seen to be issuing from the wound, which proved to be the cerebro-spinal fluid. The child was placed in the ventral decubitus, the pelvis was raised, and in a few days the wound was quite dry.

He was kept in the position for about a fortnight, by which time cicatrization was complete.

M. D. EDER.

Hydronephrosis in a child (*'Urol. and Cut. Review,'* 1913, xvii, p. 663).—**Kate W. Baldwin** operated on a boy, aged 2 years, for congenital cystic kidney, whose symptoms had first appeared shortly after circumcision at the age of three months. The right kidney, with a cyst containing 2500 c.c. of fluid, was removed. The kidney was a mere shell, not half an inch in thickness at its thickest part. When the child was seen again, at the age of four years, he was in good health, and his development seemed normal in every way.

J. D. ROLLESTON.

Sarcoma of the bladder (*'Journ. de Méd. de Bordeaux,'* 1914, xxxv, p. 144).—**Bégouin** removed a sarcoma from the bladder of a girl, aged 3½ years, but death occurred some months after.

F. R. B. ATKINSON.

Congenital stricture of the prostatic urethra (*'Journ. Amer. Med. Assoc.,'* 1913, lxi, p. 244).—**W. H. Jordan** states that congenital stricture of the urethra is described as occurring at three different places—at the meatus, at the outer limit of the fossa navicularis, and at the membranous portion of the urethra. He here reports the case of an infant in whom he found a stricture in the prostatic portion of the urethra, which with difficulty admitted a small probe. It was noticed that the child never urinated and that the urine dripped from the meatus. The continued passage of a probe did not improve the condition, and the kidneys were felt to be gradually increasing in size. The child died in the seventh week of uræmic convulsions. At the necropsy both kidneys were found to be enlarged; the ureters were large and sacculated, especially the right, and the bladder was small, hard, and about the size of a large olive. In the urethra there was a stricture a quarter of an inch in length in the prostatic portion. The kidneys were cystic and showed chronic diffuse nephritis.

T. R. WHIPHAM.

Voluminous sarcoma of the testicle in a child, aged 25 months (*'Gaz. Med. des Sci. méd. de Bordeaux,'* 1913, xxxv, p. 32).—**E. Petit de la Villéon**.—The case was of interest (1) from the size of the tumour, which weighed 540 grm., and (2) from the ætiological importance of trauma. On two occasions, first at fourteen months and again at twenty-four months, the child had fallen astride on the rail of its cot and bruised its right testis. The tumour was successfully removed; the healthy left testis was left *in situ*. The prognosis was bad owing to the probability of metastasis.

J. D. ROLLESTON.

Circumcision: the advantages of a modified operation (*'Med. Press.,'* 1913, xcvi, p. 669).—**T. H. Kellock** protests against the mutilation of children by the operation of circumcision as usually performed. The prepuce is the natural covering of the glans penis, protects it from irritation or injury and preserves its sensory faculties. The most frequent condition for which circumcision is advised is difficulty in micturition, pain during the act, and all the ills which rightly or wrongly have been attributed to the dysuria. In such cases circumcision is quite unnecessary. The difficulty in micturition is very often caused by a partial blocking of the urinary meatus by preputial

adhesions which can be easily separated, but more frequently the cause of dysuria is a pin-hole orifice of the urethra, the remedy for which is a very simple matter. If the prepuce is adherent and not unduly long and its orifice is small, a small incision about a quarter of an inch in length through both the skin and mucous membrane on the dorsum and one suture is all that is necessary to allow of retraction. In cases where the prepuce is unduly long a modified operation is advocated. After separating any adhesions round the urethral opening the prepuce that projects beyond the tip of the glans is cut off in a slightly slanting direction parallel with the line of the corona; both the skin and mucous membrane are divided at the same level, and no more of the latter than of the former is removed. Then a small incision, including both skin and mucous membrane, about an eighth of an inch long, is made on the dorsum, which converts the round opening into a slightly pear-shaped one. In babies this is all that is needed, but in older children four horse-hair sutures are put in and tied tightly so that they drop out by themselves. A little tincture of iodine may be painted over the wound, but no application or dressing at all seems as good treatment as any. A small apron of gutta-percha tissue will prevent the diaper sticking to the wound, and more rapid healing takes place in this way than with any form of dressing.

T. R. WHIPHAM.

Reviews.

THE DISEASES OF CHILDREN. By HENRY ENOS TULEY, M.D., late Professor of Obstetrics, University of Louisville, etc. Second revised edition, 1913. London: Henry Kimpton. Glasgow: Alexander Stenhouse. Pp. 684, with 106 engravings and 3 coloured plates. Price 24s. net.

THIS is an American text-book of the type with which by now we have become familiar. It deals with the subject of children's diseases in a clear, precise and practical manner, and the author has wisely refrained from overburdening it with too much theory, having kept the needs of the general practitioner and the student strictly in view. Chapters on the eye, the ear, nose and throat, and the skin have been included and greatly add to the usefulness of the work. The text is embellished with 106 illustrations and temperature charts, of which 28 depict clinical and pathological subjects in a satisfactory manner. There are also 3 coloured plates illustrating Koplik's spots, the life-cycle of the *Plasmodium vivax*, or parasite of benign tertian malarial fever, and the differences in appearance between tonsillar diphtheria and follicular tonsillitis. These, however, like several of the smaller illustrations, are not original.

Although this is the second edition and the book has been partly rewritten, it is still very unequal, the later part being incomplete in many respects. The chapters on the newborn, infant feeding, diseases of the digestive system and the special subjects already referred to are perhaps the best, and mention must be made of the supplementary appendix, which contains several complicated methods for the modification of milk. It is interesting to note that the author favours operation in cases of hypertrophic stenosis of the pylorus as soon as the condition is diagnosed, and that, on

account of its being a good culture-medium for bacteria, he considers it inadvisable to give albumin-water in acute dyspeptic or diarrhœal diseases in children. Dr. Tuley's practice is to use dextrinised barley-water in the first instance in all such cases. For the same reason an exclusive milk diet in typhoid fever is not recommended. Diluted milk or butter-milk and dextrinised cereal decoctions, which may be flavoured if necessary, are to be preferred, and milk should be withheld if diarrhœa occurs.

In the chapter on general diseases there is a full description of the various forms of malaria by Dr. W. B. Burns and a section on pellagra. Diabetes mellitus is mentioned, but there is no account of diabetes insipidus or of rheumatoid arthritis of children. Chorea appears under the functional nervous disorders, and in this disease it is apparently the author's custom to push treatment with arsenic until the physiological effects of the drug are obtained. He records one case in which a severe neuritis was produced. Under the nervous system are also included the muscular dystrophies, which would have been dealt with better in a separate chapter together with disorders of the bones. As it is no account is given of such conditions as chondroplasia and osteogenesis imperfecta, neither is amyotonia congenita mentioned. In the chapter on diseases of the blood the account of leukæmia is confusing. The myeloid form is described under lymphatic leukæmia, and no stress is laid upon its excessive rarity in childhood. With the exception of icterus neonatorum no mention is made of jaundice, and reference to infection of the peritoneum and joints by the pneumococcus has been omitted. The subject of idiocy, too, is inadequately dealt with. Cretinism is described under diseases of the lymphatic glands, and Mongolian idiocy is there incidentally mentioned, but that is all. In the same way there is only a brief reference to infantilism, and precocious development is ignored. In diseases of the genito-urinary system we could find no account of congenital cystic degeneration of the kidneys, and under the treatment of vulvo-vaginitis we are told that "because of the possibility of involvement of the scrotum and contents in male infants the child should be kept in bed entirely during the acute stage."

We might mention other omissions of less importance and criticise the arrangements of some of the subjects; for instance, we should have liked to see amongst others separate descriptions of various disorders, such as tetany, instead of a passing reference which escapes mention in the index, but the foregoing will serve to show the kind of inequality which the book presents.

Throughout the work we were struck by the numerous incongruities and errors in prescription-writing and in the Latin. In some of the prescriptions the ingredients are given in English, in some in Latin, and in others in a mixture of the two. As examples we may quote the following: "*R. Cocaine muriat gr. x; ac. boracic saturated sol.; alcohol aa, 3j. M. Politzeration should be performed after paracentesis*" (an instruction which would probably be unintelligible to the patient's nurse and impossible for her to carry out). "*R. Tartar emetic; powd. ipecac aa. gr. I-100; sacch. lactis q.s. M. Ft. tablet No. 1.*" Further, in many the preposition "*ad.*" is omitted before the quantity of the vehicle to be dispensed. In speaking of drugs the nominative and genitive cases are frequently used indiscriminately; thus we find "*sodium chloridi,*" "*syr. ipecacuhana,*" "*cerii oxalatis*" (where it should have been "*oxalas*"). The genitive "*alcoholis,*" which is sometimes used, we must also object to; alcohol is an Arabic, not a Latin word. Hybrid terms such as "*pulv. calamine prep.,*" "*tincture ferri chloridi,*" "*pleurisy sicca*" and "*anemia pseudoleukemic infantum*" like-

wise occur. Again, "iodini" and "ac. boracici" are not correct terms, neither is "charta" the Latin for "cachet," as we suppose the writer intends. Then we find "laurecerasi," "felix mas," "sarcini," "ferri reducti," "tenia tonsurans," "tenia mediocanollata," "hydrargiri," "ferri chloriri," and "in tabulas" (which should be the ablative). Some of these may be misprints (although otherwise there are very few mistakes in the text), but such an excuse cannot be urged for "cancarem oris," which is repeated in the text and also appears in the index (in fact the word "cancrum" never occurs), and the same applies to "Pyer's patches" and "Hirschprung's disease." In French words the accents are for the most part omitted, *e. g.* "rales," "perleche," "tache cerebrale," and "rötheln" is spelt without the umlaut.

In spite of what has been said the book has many good points, and the fact that a second edition has been called for proves its usefulness, though it is a pity that its excellence should have been marred by the omissions and errors to which we have drawn attention. The printing and general get-up of the book are in every way admirable, and the illustrations are well reproduced. There is a fairly full index, but it is not complete.

T. R. W.

THE MEDICAL WHO'S WHO, 1914. London: The London and Counties Press Association. Price 10s. 6d. net.

The increasing popularity of 'The Medical Who's Who,' which is now in the third year of its existence, is shown by the present issue being considerably larger than its two predecessors. A good number of names, celebrated and obscure, are still missing, but, in spite of its incompleteness, the work contains a great amount of useful and entertaining information not obtainable elsewhere. An alphabetical list of the towns with the names of resident practitioners is appended in this new edition.

J. D. R.

E. MERCK'S ANNUAL REPORT OF RECENT ADVANCES IN PHARMACEUTICAL CHEMISTRY AND THERAPEUTICS. Vol. xxvi, 1913.

We have received a copy of this useful publication, which is too well known to require any introduction. The present issue, which deals with advances in pharmaceutical chemistry and therapeutics up to the end of 1912, maintains a high standard equal to that of former years. The introductory article is on lecithin, and much valuable information is given about this preparation. The interest taken in salvarsan is indicated by the fact that the bibliography in relation to this drug extends to over seven pages. In an appendix Prof. Heinz writes on "The Assay and Standardisation of Digitalis Preparations." We feel sure that medical men will, as in the past, be able to glean much that is of value from its pages. We understand that a limited number of copies may be obtained gratis on application to the London office, 66, Crutched Friars, E.C.

J. A.